

# Railway Age Gazette

DAILY EDITION

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THE twenty-fifth annual convention of the American Railway Master Mechanics' Association was held at Saratoga 20 years ago, with a membership of 511. The president was John Mackenzie, and the secretary Angus Sinclair. The proceedings dealt largely with locomotive testing, one report relating to standard methods of testing locomotives; another was on tests of compound locomotives, and related to tests of a Vaucrain compound compared with a simple engine of similar type on the Chicago, Milwaukee & St. Paul. This led to a lengthy discussion which brought out the accounts of the performance of the various types of compound locomotives then in use, and while these were, as a rule, favorable to the compound locomotive, the general opinion as expressed by members was not favorable to it. The meeting was not particularly notable, excepting for this report and the discussion on compound locomotives.

THE special facilities, organization and methods required to properly take care of Mallet locomotives at terminals is a subject that seems to be of sufficient general interest and importance to justify the Master Mechanics' Association in appointing a special committee to investigate and report at the next meeting. The service of these very large locomotives is affected more seriously by lack of attention at terminals, than locomotives of any other type. Not only are they usually compounds, which alone means extra attention if the full benefit of the compound feature is to be obtained, but boilers of the size generally used need the most careful inspection and a high character of workmanship in repairs. The importance of this feature seems to increase in even a greater ratio than the increase in size. Some roads are maintaining the Mallets in practically perfect condition while others have not yet solved the problem of doing it. At some points there are rather elaborate facilities for the work and at others no special arrangements are found necessary. Some engine houses have a special gang used exclusively for work on Mallets, others use the regular workmen as they may be at liberty. There are good and also indifferent results from both ways and it would seem advisable to have the subject studied and a report made which would give the members at least a few general principles which should be followed and permit an open and free exchange of experiences during the discussion.

UNDER the heading "CAR BUILDERS HAD BRILLIANT BALL. Million Dollar Pier Scene of Beauty and Splendor Last Night," the Atlantic City *Evening Union* of Friday thus described the informal social gathering of the M. C. B. Association held on Thursday night last: "Delegates to the Master Car Builders' Convention enjoyed their annual hop on the Million Dollar Pier last night. The function was the most brilliant in the history of the association, fully a thousand members and their ladies being on the floor at one time. Decorations were unusually elaborate, including potted plants of every description, with hundreds of dollars' worth of American Beauty roses going as souvenirs of the occasion. \* \* \* \* Gowns worn by the women were exquisite." Sorry we weren't around when the roses were passed. The sort of stuff we have quoted from the Atlantic City *Evening Union* is the kind that makes railway men and many other people think that some newspapers don't care a rap whether they print facts or the opposite. The truth is, as everybody attending the convention knows, that there is a special effort this year to make all entertainment features as informal as possible; that there was no ball last Thursday night, but merely an informal dance; that there were no special decorations at all; that not a dollar's worth, or a penny's worth, of American Beauty roses were given away as souvenirs; that members of the entertainment committee and many other men appeared in their street clothes, and that the number of "exquisite" gowns worn by the ladies was unprecedentedly small. The thing is, of course, a small one but it merits serious comment as illustrating the tendency of many newspapers to publish in regard to more serious railway matters not what actually happens but what ought to have happened in order to make a good newspaper "story." If any other man or woman who had attended that dance had gone away and told what the newspaper reporter told he or she would have been called by that "ugly and shorter name." What makes falsehood, when published in a newspaper, one thereby told to many people, anything different from the lie that is told only by one person to one other person?

#### LUBRICATION OF LOCOMOTIVE CYLINDERS AND VALVES.

THE use of superheat in locomotives has incidentally brought about important improvements in cylinder and valve lubrication. These relate not only to the methods employed, but also to the quality and quantity of the lubricants. The number of lubricators has been reduced and local applications of the lubricant have been almost abandoned. The new principle is based on general lubrication of both valve and piston by converting the heavy valve oil into a fine spray by means of an atomizer and introducing it in the steam pipe near the steam chest. This method has proved to be very satisfactory in connection with the use of superheated steam.

The black coating often seen on cylinders was formerly regarded as the result of the burning or carbonization of the valve oil, and with superheated steam its presence was accepted as proof of the necessity of more lubricant and of a higher fire test oil. It has been demonstrated that the largest proportion of this deposit comes from the smokebox gases which are drawn into the cylinder when drifting. It has been further shown that the improved valve oils for use with superheated steam will not carbonize at 800 deg. F., and to avoid this black coating some other remedy should be applied beside more oil and a higher fire test. If the throttle is left slightly open, or a drifting valve is used when descending grades, the small steam flow will prevent the suction of gas and sparks into the cylinder and at the same time supply a slight lubricant which will prevent cutting and save packing rings. While this fact has been known for a long time, little advantage has been taken of it in locomotive practice, and it has remained for a lubricating oil company to again point out the importance of the use of a light flow of steam through the valves and cylinders when the engine is drifting. The Lake Shore has used with advantage on superheater

engines an automatic drifting valve which accomplishes the same purpose, by opening when the throttle is closed. It is found also that when air and smokebox gases are admitted to the cylinder they dry up the lubricant, while if steam is present this action does not take place. The results of the improved lubricating methods now in operation are showing large savings in the amount of valve oil used, and those directly in charge claim that less than half the oil is now required and the valve and cylinders are kept in better working condition.

#### RAILWAY ELECTRICAL ENGINEERS.

WHILE the car builders were in session on Friday another meeting with allied interests was being held at the Hotel Dennis, and in the issue of THE DAILY for June 15 was given a report of the semi-annual meeting of the Association of Railway Electrical Engineers. On the same day a meeting of Railway Chemists and Testing Engineers was held at the Chalfonte Hotel. Atlantic City is also the usual meeting place of the American Society for Testing Materials, and in former years it held its sessions immediately after the adjournment of the mechanical conventions. The concentration of these meetings of mechanical societies at Atlantic City at the time of the railway mechanical conventions shows the interest which these men have in the application of science to railway equipment and the manufacture of railway materials. These societies are of comparatively recent origin, and for the first 35 or 40 years of American railways the civil engineer was the only technically educated man employed. The older railway mechanical officers can remember when there was no railway testing room or chemical laboratory nor specifications for materials used in railway shops.

The first railway testing laboratory was established by the Pennsylvania Railroad at Altoona, in charge of Godfrey W. Rhodes. Then followed the chemical laboratory in charge of Dr. C. B. Dudley, and soon after those of John W. Cloud and Richard H. Soule. These men formed the first railway technical club, with headquarters in their rooms at the Logan House, and the application of science to the mechanics of railways and to the preparation of specifications for railway materials thus made its beginning in the early days when iron and steel manufacture and locomotive and car building were growing too important for rule-of-thumb methods.

The Association of Railway Electrical Engineers is the youngest of these technical societies which is directly interested in railway equipment. Starting as a society of electric car lighting engineers it performed valuable service in developing electric car lighting to such a point that it is now considered almost an essential of satisfactory passenger service. Having accomplished this it is now concerned in standardizing the equipment and in perfecting its operation so as to make it more efficient and economical. The society soon found that its activities need not be limited to electric car lighting, and it broadened the scope of its interests so as to include all the different classes of work which the railway electrical engineer directs, and the name of the society was changed accordingly. It is now largely concerned with the lighting of offices, stations, yards, round houses and shops, and the equipment of electric motors for shops, and numerous other places where such motors are finding application to railway work.

At the recent meeting in Atlantic City car lighting and shop motors were the principal subjects under discussion, and while formal papers are not presented, our report of the proceedings will indicate that railway mechanical officers will find in the printed proceedings of the October meeting the latest news and descriptions of the most improved equipment for the application of electricity to railways. The society may well be regarded as a part of the larger railway mechanical associations, for its electrical standards are almost universally adopted by them, and it is fortunate that there is at hand a body of technical specialists to which such questions may be referred.



## Announcements.

### PROGRAM OF THE WEEK.

#### MASTER MECHANICS CONVENTION.

MONDAY, JUNE 17.

Prayer .....	9.30 A. M. to 9.35 A. M.
Address by the President.....	9.35 A. M. to 9.50 A. M.
Intermission .....	9.50 A. M. to 9.55 A. M.
Reading of the minutes of the last meeting .....	9.55 A. M. to 10.00 A. M.
Report of the secretary and treasurer	10.00 A. M. to 10.15 A. M.
Assessment and announcement of dues; appointment of committees on correspondence, resolutions, nominations, obituaries, etc.....	10.15 A. M. to 10.25 A. M.
Election of auditing committee.....	10.25 A. M. to 10.30 A. M.
Unfinished business .....	10.30 A. M. to 10.35 A. M.
New business .....	10.35 A. M. to 10.45 A. M.
Discussion of reports on:	
Advisory, Technical.....	10.45 A. M. to 11.00 A. M.
Mechanical Stokers.....	11.00 A. M. to 11.30 A. M.
Revision of Standards.....	11.30 A. M. to 12.00 A. M.
Specifications for Cast Steel Locomotive Frames .....	12.00 P. M. to 1.30 P. M.

TUESDAY, JUNE 18.

Discussion of reports on:	
Main and Side Rods.....	9.30 A. M. to 10.00 A. M.
Consolidation .....	10.00 A. M. to 10.15 A. M.
Safety Valves .....	10.15 A. M. to 10.45 A. M.
Safety Appliances.....	10.45 A. M. to 11.00 A. M.
Design, Construction and Maintenance of Locomotive Boilers.....	11.00 A. M. to 12.00 A. M.
Contour of Tires.....	12.00 P. M. to 12.30 P. M.
Individual Paper on	
Increased Power obtained with Superheat as Compared with the Maximum Power Obtained with Saturated Steam, Prof. C. H. Benjamin and Prof. L. E. Endsley .....	12.30 P. M. to 1.00 P. M.
Steel Tires .....	1.00 P. M. to 1.30 P. M.

WEDNESDAY, JUNE 19.

Discussion of Reports on:	
Flange Lubrication .....	9.30 A. M. to 10.30 A. M.
Minimum Requirements for Headlights .....	10.30 A. M. to 11.00 A. M.
Standardization of Tinware.....	11.00 A. M. to 11.15 A. M.
Maintenance of Superheater Locomotives .....	11.15 A. M. to 12.00 A. M.
Engine Tender Wheels.....	12.00 P. M. to 12.30 P. M.
Resolutions, Correspondence, etc..	12.30 P. M. to 12.40 P. M.
Unfinished business .....	12.40 P. M. to 12.45 P. M.
Election of officers .....	
Closing exercises .....	12.45 P. M. to 1.30 P. M.

Adjournment.

#### ENTERTAINMENT.

MONDAY, JUNE 17.

*Orchestra Concert, 10.30 A. M.*—Entrance Hall, Million Dollar Pier.

*Orchestra Concert, 3.30 P. M.*—Entrance Hall, Million Dollar Pier.

*Social Gathering and Informal Dance, 9.00 P. M.*—Blenheim Exchange, Marlborough-Blenheim Hotel.

TUESDAY, JUNE 18.

*Orchestra Concert, 10.30 A. M.*—Entrance Hall, Million Dollar Pier.

*Orchestra Concert, 3.30 P. M.*—Entrance Hall, Million Dollar Pier.

*Informal Dance, 9.50 P. M.*—Entrance Hall, Million Dollar Pier.

#### MEETING OF B. & O. MEN.

It has been suggested by a number of members or guests of M. M. & M. C. B. Associations at the conventions who either served an apprenticeship, began their railway careers or have been long identified with the Baltimore & Ohio, and particularly with its mechanical department, that some kind of organization or fraternity be formed, and that they meet to-day. The American Car & Foundry Company offers its space—No. 610—as convenient, and asks all who are interested to register there Monday as early as possible.

The following are known to be here, practically all of whom have been seen and will gladly co-operate: P. C. Cromwell, J. Snowden Bell, Harry Monkhouse, C. F. Giles, T. G. Smallwood, John Tonge, B. M. Carr, J. B. Kilpatrick, R. F. Kilpatrick, J. F. Deems, F. C. Cooper, E. W. Greives, Edw. Weisgerber, W. M. Bosworth, W. F. Bentley, B. H. Hawkins, A. W. Horton, A. P. Pendergrast, J. P. Callahan, S. M. Dolan.

#### FOUND.

Return portion of a Pennsylvania R. R. round-trip ticket from Chicago to Atlantic City. Owner can get same by applying at the enrollment booth.

#### RAILWAY CLUB SECRETARIES.

The Society of Railway Club Secretaries held its annual meeting last Saturday morning at the Marlborough-Blenheim. In the absence of George H. Frazier, the chairman, who had been unexpectedly detained in Boston by business, J. B. Anderson of Pittsburgh, vice chairman, presided. The various clubs with the exception of the Richmond, St. Louis and Southern & Southwestern, were represented by their secretaries and presidents and first vice-presidents. Regrets were received from the absentees that other duties prevented their reaching Atlantic City, and made it necessary to content themselves with sending cordial greetings.

The secretary-treasurer, Harry D. Vought, in his annual report presented, said that progress has been made with the proposed organization of the American Association of Railway Secretaries, which is intended to take in as members all secretaries of railway associations except those of organized labor. As a number of these have signified their readiness to co-operate it was agreed to proceed with the movement and endeavor to complete the work during the ensuing year. Another matter of gratification was the showing as to the popularity and usefulness of the Index published by the society annually, giving the list of subjects dealt with in papers presented before all the clubs during the preceding season of activity, the names of the authors and their official connection. Mr. Vought stated that it had been highly useful for reference purposes not only by club members, each one of whom is furnished with a copy, but by others not eligible to club membership and from whom requests were received for the booklet. The effect had been to increase the circulation of the books of proceedings issued by the clubs and containing papers of special importance. During the past year nearly 10,000 copies of the Index were distributed, which is an indication of the total strength of railway club membership.

Mr. Frazier of the New England club was again re-elected chairman. Mr. Anderson of the Pittsburgh club was made vice chairman, and Mr. Vought continued in the office of secretary-treasurer, in which he has served since retiring from that of chairman some years ago. He is now the only member left of all the secretaries who were originally enrolled when the society was formed in 1896 at the sugges-

tion of Daniel M. Brady, president of the Brady Brass Company, who enjoys the distinction of being the first man that ever performed the duties of a railway club secretary.

At the Strand hotel Saturday evening the members of the society and their friends sat down to the annual dinner. W. F. Jones, of the New York Central, first vice-president of the Central club of Buffalo, presiding. Covers were laid for 30 and the occasion was one of the most enjoyable the society has had. There were no toasts and responses, as it is the rule that only two men are entitled to talk—the chairman and the club officer who occupies the head of the table.

#### THE PURDUE DINNER.

The Purdue men attending the conventions assembled for their annual dinner on Saturday evening. Of about fifty men in attendance at the conventions, the following were registered for the banquet: E. L. Adreon, American Brake Co.; W. L. Batt, Hess-Bright Mfg. Co.; Hugo Berthold, N. Y. C. & H. R.; Prof. L. E. Endsley, Purdue University; F. B. Ernst, American Steel Foundries; W. J. Eddy, C. R. I. & P.; R. F. Darby, The Billiod Co.; Geo. E. Hallenbeck, Baker Bros.; Percy Houser, Pennsylvania R. R.; W. S. Humes, General Railway Supply Co.; F. H. Herzsich, Westinghouse Electric & Manufacturing Co.; J. H. Jaschka, National Malleable Castings Co.; C. R. Jamison, Acme Supply Co.; J. M. Lammedee, Railway and Engineering Review; J. R. Mitchell, W. H. Miner Co.; R. R. Mitchell, Crocker-Wheeler Co.; J. P. Neff, American Arch Co.; W. H. Patterson; C. H. Quinn, Norfolk & Western; G. P. Robinson, United States assistant chief inspector locomotive boilers; F. S. Robbins, Pennsylvania R. R.; E. E. Silk, Bettendorf Axle Co.; H. A. Smith, Railway and Engineering Review; B. D. Tozzer; A. O. Van Dervort and W. H. Winterrowd, Damascus Brake Beam Co. A committee, consisting of Messrs. Endsley, Silk, Neff, Winterrowd and Lammedee, was appointed to arrange for next year's banquet.

#### CORNELL DINNER.

Cornellians attending the convention held their seventh annual dinner at the Hotel Chelsea on Saturday evening. This proved to be one of the most pleasant and important meetings ever held by this association. Through the courtesy of J. H. Thomas professional talent from New York furnished entertainment during the serving of the dinner and the impromptu toasts following brought out a lively discussion on subjects of serious interest to all engineering alumni of the university. B. P. Flory, superintendent of motive power of the New York, Ontario and Western was elected president for the ensuing year.

The following members and guests were present: J. F. DeVoy, '88, assistant superintendent of motive power, Chicago, Milwaukee & St. Paul; F. F. Gaines, superintendent of motive power, Central of Georgia; B. P. Flory, '95, superintendent of motive power, New York, Ontario & Western; F. M. Whyte, '89, general manager New York Air Brake Company; L. A. Shepard, '92, Scullin-Gallagher Company; C. P. Storrs, '95, Storrs Mica Company; A. R. Ayers, '00, general mechanical engineer, New York Central Lines West of Buffalo; H. G. Macdonald, '00, Standard Steel Car Company; J. N. Mowrey, '00, formerly master mechanic, New York, New Haven & Hartford; E. A. Averill, '00, Managing Editor, *American Engineer*; A. J. Sweet, '01, Nelite Works of the General Electric Company; C. D. Young, '02, engineer of tests, Pennsylvania Railroad; A. S. Lewis, '02, Chicago-Cleveland Car Roofing Company; R. L. Rogers, '03, Woven Steel Hose and Rubber Company; Mr. Sibson, '03, Harrison Safety Boiler Works; R. S. Cooper, '03, Independent Pneumatic Tool Company; F. C. Wight, '04, *Engineering News*; F. N. Bard, '04, Barco Brass & Joint Company; L. H. Snyder,

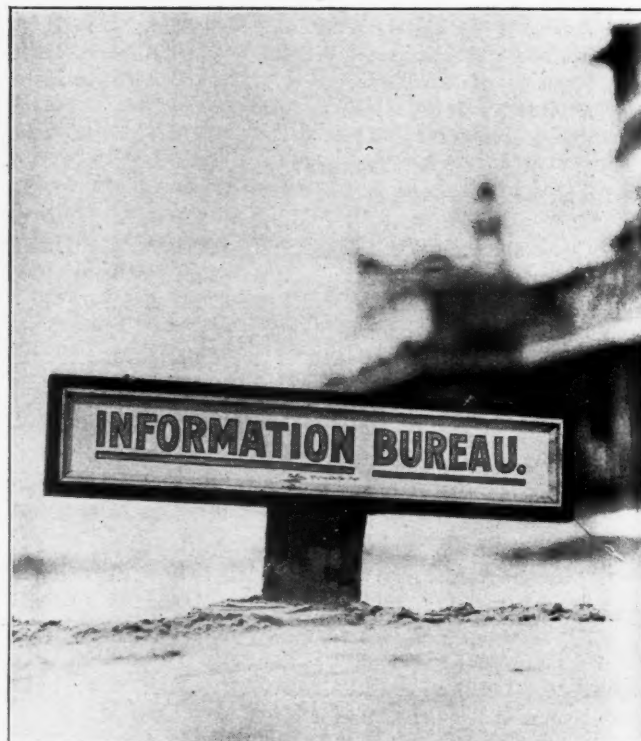
'06, Jos. Dixon Crucible Company; H. H. Gilbert, '07, Pressed Steel Car Company; Sillstrom, '07, Dahlstrom Metallic Door Company; J. F. Benedict, '07, Boss Nut Company.

#### WHAT ARE THE WILD WAVES SAYING?

While strolling on the boardwalk,  
I saw an M. C. B.  
Reclining on the sand nearby  
With a well-known S. M. P.

Now, what on earth can this portend?  
They surely are not dolts;  
One had his ear close to the ground,  
The other was taking notes.

A sign near by caused me to start,  
For on it plainly painted  
Was "Information Bureau"—  
And then I almost fainted.



#### What are the Wild Waves Saying?

"By crimps!" says I; I'm going to see  
Who's crazy; they or I.  
So down I went to find the truth,  
Prepared to live or die.

"What are the wild waves saying?"  
Came from the S. M. P.  
"You'll find McCord in 5-1-3,"  
Replied the M. C. B.

"The Pressed Steel Car is 6-2-0;  
Forsyth's in 6-0-1,  
And if you call at 4-2-0  
You'll see a record run."

A lot more news came from the deep—  
The wild waves know it all;  
So if you lose your way while here,  
Just drop around and call.



## THE ANNUAL CONVENTION BASE BALL GAME.

The Western Team, by a Score of Seventeen to Ten,  
Wins Another Decisive Victory from the Eastern Players.

Those who expected the unexpected got what they expected at the Inlet Park base ball grounds Saturday afternoon. The expected was that the East would beat the West, and that is a perfectly good description of what did not happen. Before the gong was sounded at the end of the ninth round the effete East had once more been knocked over the ropes and was down and out. It was the eighth time that Orient and Occident had met head-on at the mechanical conventions. In four of the previous collisions the Orientals had fallen before the fierce onslaught of the Occidentals. The Easterners had come determined to even up the score. They were touted as an aggregation that

It rained, it was cold, and it looked for quite a while as if it wouldn't be possible to play, but in spite of all that it was a pretty good game. And it wasn't one-sided, either, by a long shot. At the start it looked as if it was going to be one-sided and in favor, not of the West, but of the East. Side-wheeler Bradford of the Eastern team was steady and put them over the plate whenever he wanted to, while pitcher Smith of the Western team occasionally was wild as a March hare. But in pinches Smith was reliable in both his pitching arm and his head work, and toward the last, while continuing to be fast, he became as steady as a farm horse, and while the Easterners hit him they couldn't place them, and never reg-



THE WESTERN TEAM.

Top row, left to right—McCloy, Cooke, Van Patten, Tarleton, McIntosh. Bottom row, left to right—Schwartz, Snow, Captain Hammond, Assistant Mascot Gossett, Odegard, Mascot Telford, Smith, Midgley.

could make Mathewson eat out of their hand, that could beat up the Giants as if they were pigmies, and could make the world's champion Athletics look like a Y. M. C. A. handball team. The vocal betting was three to one that they would win. But they came back all the same as Jim Jeffries. When the shades of evening fell, and the conventionites beat it to their hotels to debate whether to put on their evening clothes or not, the score of the game was Occident, 17, Orient, 10, and the score for all the games played between these rivals was East, 3; West, 5. The East came thirsting for revenge, and it went away with some more thirst. There'll be a bloody struggle next year to even up that record, you bet.

istered between the third and the ninth innings. Both nines gave good support, but at times it was of the back lot variety. That given by the East was better than that given by the West. The team work done by the Westerners was surprising in view of the small amount they had practised together.

The weather was distinctly rotten. When the time came for the parade to start from the Million Dollar Pier it was raining pussies and pups. The managers said, however, that there would be a game if it poured full grown tom cats and bull dogs, or Hagenbeck's whole animal show, and a considerably abbreviated procession, headed by a delegation of Atlantic City police, and including a band, teams and a bunch of waterproof rooters, started on schedule time, paddling

down the Boardwalk for South Carolina avenue, where special cars were in waiting. It drizzled off and on all afternoon, and was so cold that it looked as if the players would have to perform in their overcoats, and the rooters did wear theirs. But rain could not dampen nor cold cool the ardor of the players or of that faithful rooting few. They stuck right there till the dinner bell rang.

The game was mostly peaceful, but there were two controversies. In the first half of the second inning a question arose as to whether McCloy was safe at first. Captain O'Brian insisted he was out, and Captain Hammond insisted he wasn't. Umpire Cade decided he was. In the last half of the ninth the Eastern team sent Randolph and Hibbard to bat out of their order, and Captain Hammond kicked strenuously.

Honors were easy for "Midge," the veteran war-horse of the West. It was his tenth game at the conventions, and he made

equally sensational two-handed not-stops. Last year Wildin's breaking of his bat was the high point of the game, and as he was called up for the first time yesterday B. A. Hageman, Jr., stepped forth and presented him with a bat big enough to be proof against the insistence of an Ajax. The only bat-breaking done yesterday was by Odegaarde, the iron man of St. Louis.

#### FIRST INNING.

The first batter up for the West was Tarleton, and the first ball pitched by Bradford was a strike. Tarleton was hit and walked to first, went to second on a passed ball, and stole third. Midgley struck out. Snow drove a three-bagger to center field, Tarleton scoring. Smith's slow hit towards third struck foul, rolled fair and went for a single, Snow scoring. Bradford tried to catch Smith off first and threw wild, Smith going to third. Hammond's hard drive to short was good for a single, Smith scoring. Schwartz fanned. Hammond tried to steal



THE EASTERN TEAM.

Top row, left to right—Umpire Cade, Fleming, Manager Nellis, Engle, Randolph, Hatch, Potter, Umpire Cooper. Bottom row, left to right—Bradford, Beaumont, Manager Wildin, Captain O'Brian, Mascot Mitchell, Hibbard, Oviatt, Oatley.

one hit, and a bunch of nice running catches, put seven men out, and assisted in putting out four others, in the course of which he participated in three double plays and covered a large acreage around second. Snow made two 2-baggers and one 3-bagger, which indicates that he was doing some tall batting. Hammond caught in good style, and made three safe hits, including a 3-bagger.

O'Brian did a good job at second, making three put-outs, one assist and one hit. Bradford struck out twelve men, which ordinarily would win a game.

George Wildin had a bet with Fred. Nellis that he would steal a base, and when he successfully slid to second in the sixth inning he grinned a grin that looked like a crisp new one-dollar bill clean across the diamond at Nellis before he got up. He made one sensational one-handed stop, and some other

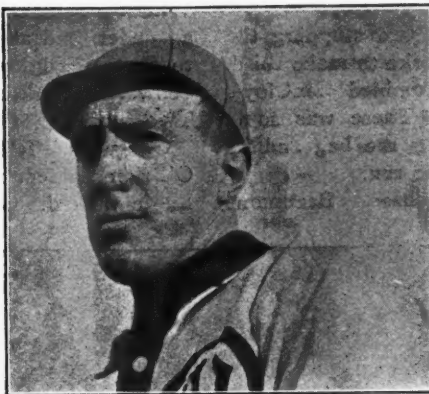
second while the pitcher had the ball and was put out. Three runs.

Smith couldn't find the plate, and Beaumont walked. Hammond made a nice catch of Hibbard's fly, but threw wild trying to double Beaumont at first, Beaumont going to third. Wildin beat out a slow grounder to first, but Beaumont was afraid to attempt to score. O'Brien bunted safely, Beaumont scoring, and Wildin went to second. Engle also found Smith, and made a neat two-bagger over third, Wildin and O'Brien both scoring. Engle went to third on a wild pitch and scored on Potter's slow hit to the pitcher, which he threw wild, allowing Potter to go all the way home. Fleming was hit by a pitched ball and walked to first rubbing his arm. Midgley made a nice running catch of Oviatt's hit to center and threw to first in time to make a double play. Five runs.





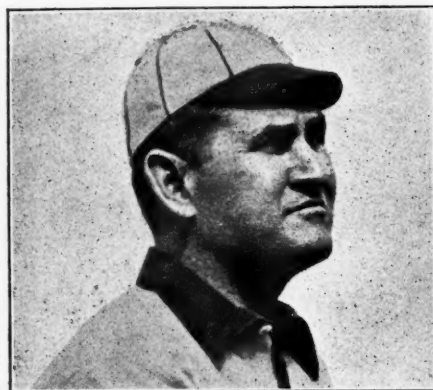
Harry S Hammond, c.



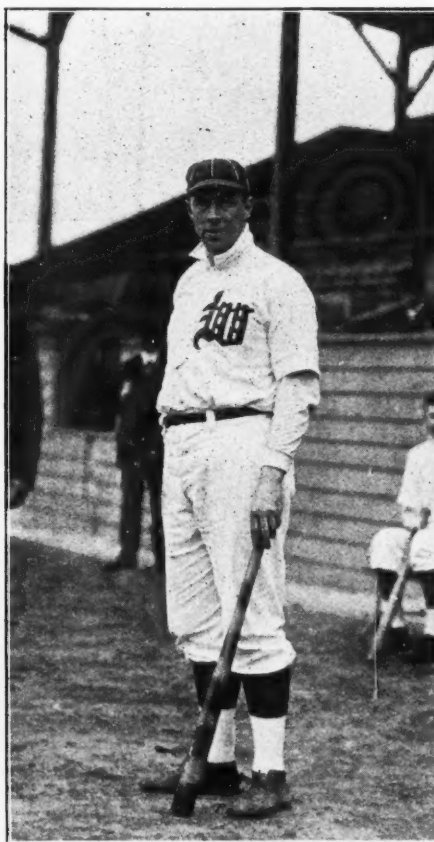
Stanley W. Midgley, 2b.



Elmer J. Smith, p.



C. L. Schwartz, 1b.



Capt. Harry S. Hammond, c.



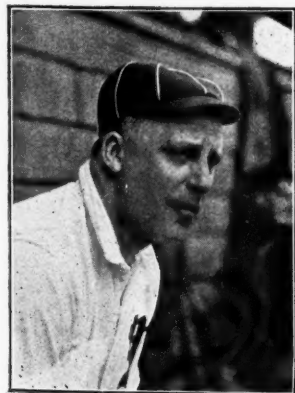
A. J. Odegard, 3b.



James E. Tarleton, s.s.



J. H. McCloy, i.f.



E. B. VanPatten, Sub.



G. T. Cooke, r.f.



Neil W. Snow, c.f.



R. L. McIntosh, Sub.

THE WESTERN TEAM.

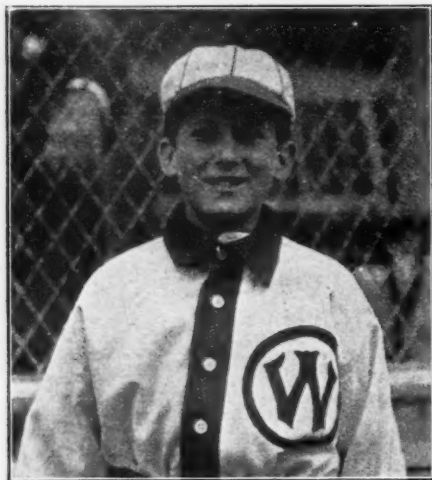
## SECOND INNING.

Cooke singled through the pitcher, Hibbard stopping the ball and making a wild throw, allowing Cooke to make third. Odegaarde struck out, and Hibbard fumbled McCloy's grounder, allowing Odegaarde to score. There was some misunderstanding about McCloy's touching the bag and he was called out. Tarleton struck out. One run.

Bradford drove a single over second base. Beaumont

Wildin and O'Brian took turns in juggling Smith's grounder, and at last dropped the ball, Smith getting safely to first. Midgley and Snow both scored. Hammond and Schwartz struck out. Wildin took care of Cooke's grounder. Two runs.

Odegaarde fell attempting to get O'Brian's foul fly. O'Brian walked, and went to second on Smith's wild pitch. Engle walked. O'Brian stole third, and Engle stole second.



Master Elliott A. Telford,  
Western Mascot.



Master Edwin J. Mitchell,  
Eastern Mascot.



Charles Gossett, Jr.,  
Assistant Western Mascot.

tried to sacrifice and bunted to the pitcher, who threw wild to second. Both were safe. Hibbard's drive to right was caught by Cooke. Midgley took care of Wildin's grounder, tagged Beaumont and threw to first in time to make a double play. No runs.

## THIRD INNING.

Bradford could not find the plate, and Midgley walked. Snow made a two-bagger over third, Midgley going to third.

Smith stopped Potter's grounder and threw over the first baseman's head, O'Brian, Engle and Potter scoring. Fleming struck out, and Oviatt did likewise. Beaumont was hit by a pitched ball, Bradford advancing to second. Hibbard went out on a slow grounder to Smith. Three runs.

## FOURTH INNING.

Wildin made a great left-handed stop of Odegaarde's hard line drive, and he was out at first. McCloy fanned. O'Brian

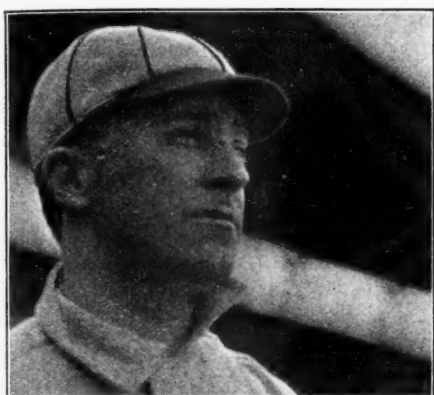


Half of Cooper and Most of Umpire Cade.

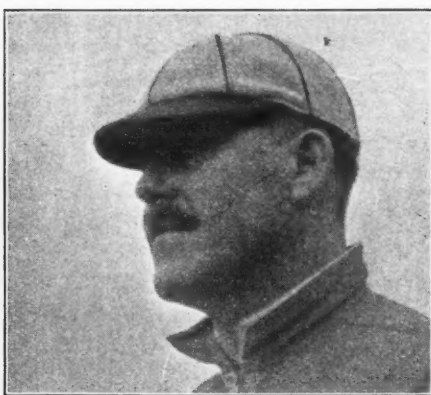


Cooper Wondering What the Captains Will Do to Cade.





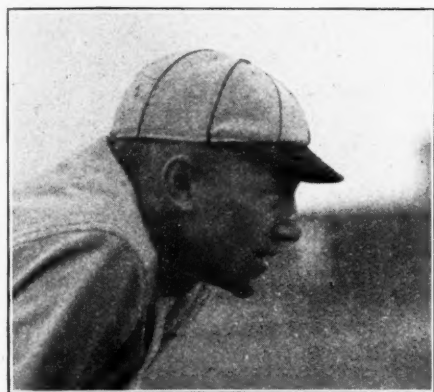
Clifford Beaumont, c.f.



Harry C. Oviatt, r.f.



John V. Randolph, Sub. c.f.



J. E. Fleming, l.f.



Capt. Thomas P. O'Brian, 2b.



Harry B. Bradford, p.



Leonard J. Hibbard, s.s.



George W. Wildin, 1b.



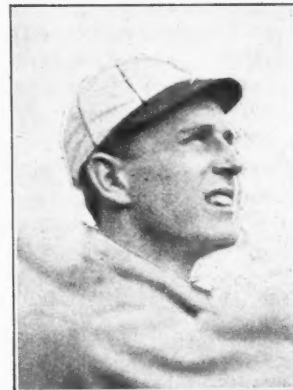
Al Engle, c.



H. B. Oatley, Sub. 1b.



M. C. M. Hatch, Sub r.f.



S. C. Potter, 3b

THE EASTERN TEAM.

made a nice running catch of Tarleton's fly. No runs.

McCloy robbed Wildin of a hit, getting his fly after a hard run. O'Brian was out on his grounder to Midgley. Tarleton took care of Engle's grounder and threw him out at first. No runs.

#### FIFTH INNING.

Engle caught Midgley's foul, and Midgley threw his bat down in disgust. Although Snow had previously made a two bagger and a three bagger, he struck out. Bradford



Some of the Waterproof Fans.

also fooled Smith, making his ninth strike out victim. No runs.

Potter placed a pretty single to left center, and stole second and third while the Western team was throwing the ball around. Fleming's fly to right field was nailed by Cooke, who made a perfect throw to the home plate, keeping Potter on third. Oviatt hit to Midgley, and Midgley threw to home to catch Potter, but again Potter decided to hug third, and Oviatt was safe on first. He immediately stole second. Bradford's line drive was caught by Smith. Beaumont walked, making the fourth time he reached first without a hit. With three on bases, Hibbard fanned thrice. No runs.

#### SIXTH INNING.

Hammond made a drive over first, which was good for three bases. Bradford was undecided what to do with Schwartz' slow grounder, and his throw to first was too late, Schwartz getting there safely, and Hammond scored. Potter made a nice stop of Cooke's grounder and a perfect throw to first. Wildin dropped the ball, and Cooke went to second on the error and stole third. Potter took care of Odegaarde's grounder, but his throw to first was too low for Wildin, and Odegaarde went to third, Cooke scoring during the play. Odegaarde scored on McCloy's single to right. Wildin grabbed Tarleton's grounder and touched the bag, putting him out. Midgley drove a hard single to center. Beaumont made a good throw, holding McCloy on third. Snow hit the center field fence and McCloy scored. O'Brian threw Smith out. Hammond made his third hit of the game, his second hit this inning, Snow scoring. Engle took care of Schwartz's high foul. Seven runs.

Wildin drove the first ball pitched to center for a single. Midgley caught O'Brian's fly. Wildin cleverly stole second.

Odegaarde stopped Engle's grounder and touched Wildin out between second and third. McCloy made a good attempt to get Potter's long drive to left, but failed, and it went for a 2-bagger, Engle going to third. Fleming walked. Hatch now came to bat for Oviatt. He failed as a pinch hitter and struck out. No runs.

#### SEVENTH INNING.

Hatch began playing right field and Randolph center field for the East. Cooke was Bradford's tenth strike-out victim. O'Brian made a nice stop of Odegaarde's grounder, but could not recover himself in time to get him at first, and it went for a scratch hit. McCloy struck out, making eleven struck out by Bradford. Tarleton made a long drive to center field which Randolph caught. No runs.

Bradford went out on his hit to Smith and Randolph drew a pass. Tarleton, Midgley and Schwartz made a nice double play of Hibbard's hard grounder. No runs.

#### EIGHTH INNING.

Oatley began playing first for the East. Midgley drove a long fly to center which Randolph got under. Snow drove a hard grounder to Potter and was put out at first. Bradford walked. Hammond's grounder was taken care of by O'Brian. No runs.

Oatley struck out. O'Brian flied out to Midgley. Engle hit to Schwartz and was put out at first. No runs.

#### NINTH INNING.

Schwartz waited patiently for a base on balls, and got it. Engle failed to hold Cooke's third strike, and he went to first, Schwartz advancing to second. Odegaarde singled to right, Schwartz scoring and Cooke going to third. Cooke scored while Odegaarde was stealing second. Hibbard made a good stop of McCloy's hard grounder, but it went for a single, Hibbard's throw getting past Oatley, and Cooke, Odegaarde and McCloy scoring. Tarleton drove a single to left, and O'Brian



The First Ball Pitched.

caught Midgley's fly. Snow grounded to Bradford and was thrown out at first. Smith's long fly to left was caught by Fleming. Four runs.

Potter hit to Odegaarde, whose throw was too low for Oatley, and Potter got safely to first, and stole second. Fleming singled to first, and also stole second. Randolph flied out to Schwartz. Hibbard singled to center, Potter and Fleming scoring. Oatley struck out. The Western team claimed that Randolph and Hibbard both batted out of turn, but the referee



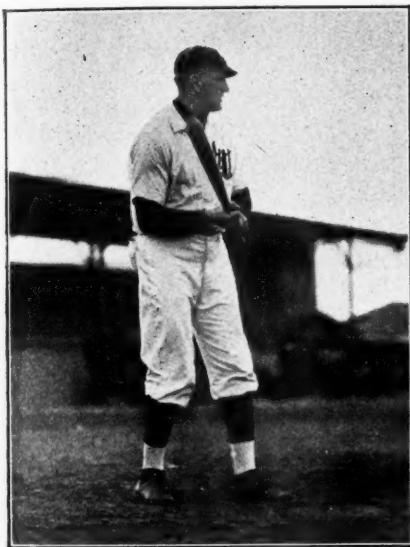
refused to put the side out. O'Brian was put out on a grounder to first. Two runs.

The following is the score by innings:

	1	2	3	4	5	6	7	8	9
WEST .....	3	1	2	0	0	7	0	0	4-17
EAST .....	5	0	3	0	0	0	0	0	2-10

The following is a summary of the game:

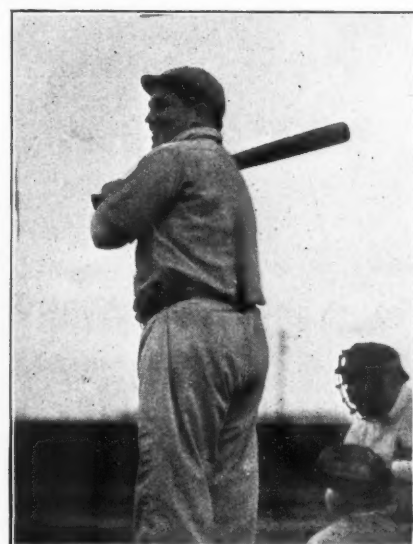
WEST.									
	A.B.	R.	1B.	S.B.	S.H.	P.O.	A.	E.	
Tarleton, s.s. ....	5	1	1	1	0	0	2	0	
Midgley, 2b .....	5	2	1	1	0	7	4	1	
Snow, c.f. ....	6	3	3	0	0	0	0	0	
Smith, p. ....	5	1	1	0	0	0	3	2	
Hammond, c. ....	5	1	3	0	0	6	0	0	
Schwartz, 1b. ....	3	2	0	0	0	9	0	0	
Cooke, r.f. ....	5	3	1	2	0	2	0	0	
Odegarde, 3b. ....	5	2	2	0	0	2	2	0	
McCloy, l.f. ....	5	2	2	0	0	1	0	1	
Total .....	17	14	4	0	27	11	4		



"Snow . . . was doing some tall batting."



"Bradford tried to catch Smith off first."



"O'Brian walked."

EAST.									
	A.B.	R.	1B.	S.B.	S.H.	P.O.	A.	E.	
Beaumont, c.f. ....	1	1	0	0	1	0	0	0	
Randolph, c.f. ....	1	0	0	0	0	2	0	0	
Hibbard, s.s. ....	6	0	1	0	0	0	1	0	
Wildin, 1b. ....	4	1	2	1	0	9	0	2	
Oatley, 1b. ....	1	0	0	0	0	0	0	0	
O'Brian, 2b. ....	5	2	1	2	0	3	1	1	
Engle, c. ....	4	2	1	1	0	12	1	0	
Potter, 3b. ....	5	3	2	0	0	0	2	1	
Fleming, l.f. ....	3	1	1	1	0	1	0	0	
Oviatt, r.f. ....	3	0	0	1	0	0	0	0	
Hatch, r.f. ....	2	0	0	0	0	0	0	0	
Bradford, p. ....	3	0	1	0	0	0	2	0	
Total .....	10	9	6	1	27	7	4		

Earned runs, West, 3; East, 2.

Two-base hits, Snow, 2; Engle, 1; Potter, 1.

Three-base hits, Snow, Hammond.

Bases on balls, by Smith, 7; by Bradford, 3.

Hit by pitcher, by Smith, Fleming, Beaumont; by Bradford, Tarleton.

Struck out, by Smith, 6; by Bradford, 12.

Double plays, Midgley and Schwartz, 2; Tarleton, Midgley and Schwartz.

Left on bases, West, 3; East, 12.

Wild pitches, Smith, 2.

Passed balls, Hammond.

The game was umpired by George Cooper of the Frost Railway Supply Company, and W. E. Cade of the Frank A. Barbey Company. Harry O. Fettinger (Clement Restein Company) kept the score card.

#### THE WESTERN TEAM.

The baseball careers of the members of the winning western team have been as follows:

Captain Hammond was both a foot ball and base ball star

in his school and college days. He belongs to a family of athletes, the members of which have made names for themselves in the central-western part of the country. He naturally preferred the game of foot ball, although he edged into a base ball game whenever the opportunity offered. He was at his best in the years 1904-5-6-7 when he played right end on the University of Michigan foot ball eleven, having succeeded Neil Snow in the position.

Stanley Midgley has earned his spurs and has retired; at least he so declared after the game Saturday night. But it is to be hoped by his many friends that he will "come back" and be with us again next year. "Midge" played in his younger days in the Cook County (Illinois) league; was three years on the Lewis Institute of Technology (Chicago) team, of which he was captain; and has played the past ten years as a member of the western team at the M. C. B. and M. M. conventions, serving as captain four years.

Snow's achievements in athletics are well known. He first played ball on the Detroit high school team; then he played for one year on the Detroit Athletic Club team, and during the next four years he was a member of the University of Michigan nine, being captain two years. He always liked best the game of foot ball, however, and in the years 1900 and 1901 he was probably the brightest star in the foot ball firmament of the West; for in the first-named year he was picked by Walter Camp for the All-American eleven, and in the following year Caspar Whitney selected Snow as his right end for the All-American eleven of the year. As a sort of side issue, just to show his general interest in athletics, as a member of the U. of M. track team, in 1903, he won the shot put and high jump events in the inter-collegiate contests. Incidentally, yesterday was the anniversary of his wedding—the eighth weekly anniversary—for on Saturday, April 20, at high noon, Snow was married to a charming young lady of Detroit.

Tarleton is a pronounced "White Sox" fan in Chicago. As a youth he played second base in the Lehigh Valley (Pennsylvania) league during which time his team won the pennant twice.

Odegarde was the best catcher and base runner the Northwest Division High School (Chicago) team ever had. Later he played on the Morris (Illinois) semi-pro. nine, then as catcher on the C. R. I. & P. Ry. team, in Chicago, and after that as a member of the Illinois Trust & Savings Bank (Chicago) team in what was known as the Mercantile League. In that year (1907) his team won the league championship. Until Saturday

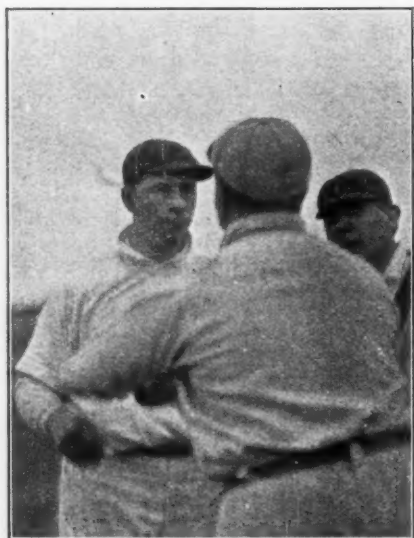
he had never played third base. In Chicago, where he lives, he is a "Sox" fan.

Elmer Smith was the crack pitcher on the Central High School nine in Detroit in the years 1903-4; in the four following years he played on the then celebrated Detroit Athletic Club nine as pitcher and manager.

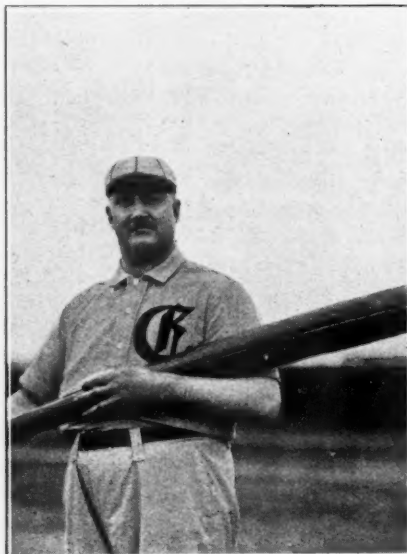
McCloy's first ball experience was with a Fairmont, West

and in 1910 he helped win the championship for the Pullman Company's nine in what was known as the Railway League.

McIntosh, substitute, is a crack runner; he prefers the mile rather than a sprint. Base ball is a sort of side issue with him, although his friends say he would have put up a stiff game Saturday, had the opportunity offered itself. He did well in athletics at Columbia University. When he entered on his busi-



"A question arose . . ."



Wildin's New Bat.



" . . . and Captain Hammond kicked strenuously."

Virginia, city league team, in which he played behind the bat. He now plays in his own home-town team in Gladden, Penn., and officiates as captain and manager.

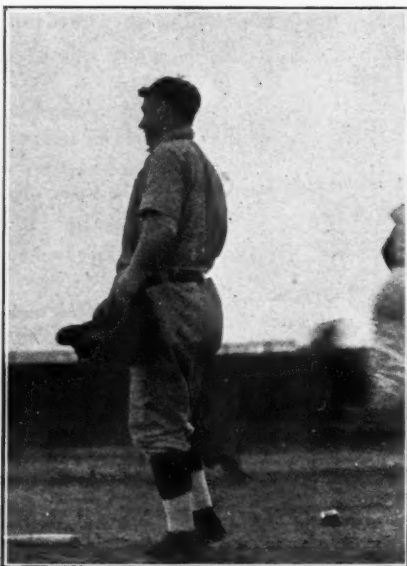
Schwartz was a semi-pro years ago at Alton, Ill., and at St. Louis, Mo. He pitched for the "Sporting News" nine in the newspaper league of St. Louis two or three years. This was

ness career as a mechanical man he played base ball on machine-shop teams in different localities. Catching is his favorite position.

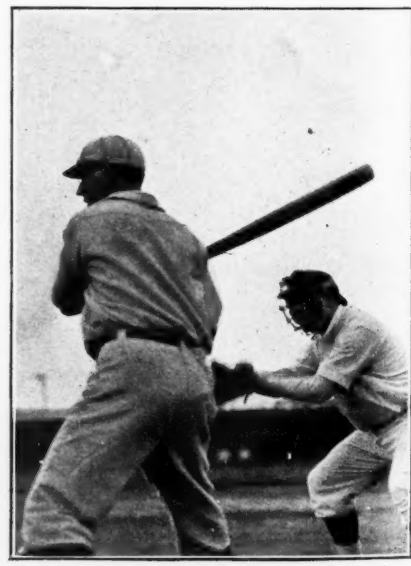
Van Patten, substitute, has played ball "here and there," as he expressed it and "just for fun." He likes the game more than any other form of sport and is a real fan.



"McCloy's hard grounder went for a single."



"Potter's long drive to left . . . went for a two-bagger."



"Bradford drove a single over second."

his second game as a member of the Western team at the conventions.

Cooke caught for the Hyde Park (Chicago) High School nine some years ago, and later he played left field and caught for the Armour Institute team in the same city in the Inter-City league. As a member of the Illinois Trust and Savings Bank team in Chicago he played in the Bankers' league in 1908-9,

#### THE EASTERN TEAM.

Thomas P. O'Brian, captain and second baseman, has had experience as a manager as well as a player. This was evident when he was on the coaching lines. For seven years he played on and managed the team of the Railway Y. M. C. A. at Buffalo. Previous to this he played second base on the Central High School team of Buffalo. He was also for





"Hammond made a drive . . . good for three bases."



Hibbard Swinging His Bat Too Fast for the Camera but not Fast Enough to Find Smith.



"The only bat-breaking done was by Odegarde, the Iron Man."

four years manager and second-baseman of the Pullman team of Buffalo. He is now identified with the Central Y. M. C. A. team in Brooklyn.

George W. Wildin, who played first base, used to be a pitcher of renown. At that time he weighed but 125 pounds and was on the 'Varsity team of the University of Iowa. Since then his practice has been largely with the teams at the conventions.

Harry P. Bradford, pitcher, has the distinction of having pitched a 19-inning tie game during which there were 10 hits made on his delivery and he struck out 30 men. This was when he was on the team of the Newton High School, Mass., in 1906-7. The game was between Newton and Dorchester high schools. He was pitcher for the Waltham Athletics and since then has played on teams at Wayne, Maine, and Hyanis, Mass.



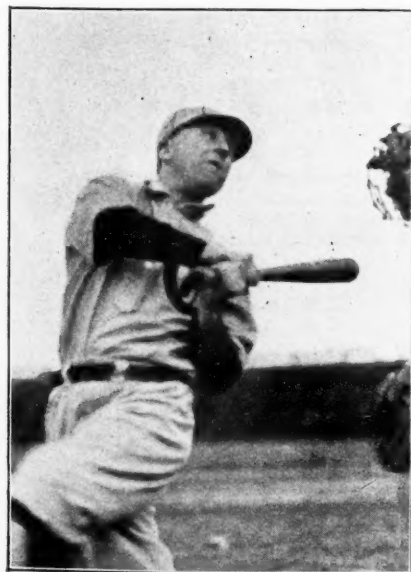
Midgley's Double-Play Smile.

Clifford Beaumont, centrefielder, has confined his base ball experience largely to Baltimore and played third base on three semi-professional teams in that city, *viz.*, Westerns, Chesterfields and Strickers. When on the latter team he developed several men who have since become well known major league players.

Sheldon C. Potter, third baseman, began his serious base ball days with the team of the Cleveland University School. After entering Princeton University he made his freshman team as shortstop and for the three following years played the same position on the 'Varsity.

J. E. Fleming, leftfielder, after playing on several school teams, joined the Kewanee, Ill., team of the Central Association. He played first base with this team for five years.

A. Engle, catcher, is now playing in the same position on the team of the Central Y. M. C. A. of Brooklyn.



Beaumont Looking to See if the Umpire Saw Him Strike.



"Hatch now came to bat . . . He failed as a pinch hitter."



Smith Almost Beaned.

Leonard J. Hibbard, short stop, played the same position on the famous Cornell University team of 1903.

Harry C. Oviatt, right fielder, played as catcher on the Mulford High School team in 1900.

Mellen C. M. Hatch, right fielder, made his base ball reputation as first and third baseman of the 'Varsity team of the University of California in 1902.

John V. Randolph, center fielder, was a member of the Boston Blues in 1890. He played first base and catcher.

Harry B. Oatley, first baseman, after playing on various school teams, entered the University of Vermont in the class of 1900. He was pitcher on the 'Varsity team in his senior year.

#### SOME VIEWS OF THE GAME.

P. P. Mirtz, mechanical engineer of the Lake Shore & Michigan Southern—"We are all boys when it comes to base ball. Who isn't? The annual contests between the East and West at the mechanical conventions should be encouraged by the presence of the railway and supply men, and by the ladies. Well, it was a fine game today, particularly from the pleasure viewpoint. It was well balanced and anybody's game up to the sixth inning, when the Eastern boys went to pieces. There were lots of errors, caused, I think, by too many holes in the players' gloves. There were no holes in George Wildin's gloves, but the trouble was that George didn't hold his hands where the ball was. A little high-degree superheater oil would have helped matters immensely. But George at the bat did wonderfully well, so we will forgive him."

H. A. Beaumont, B. & O.—"If they had taken my brother out of the game before it commenced, the result might have been different for the Eastern boys; perhaps they would have won. I used to play the game myself, and I would say, therefore, that as a whole, the boys did well today, considering the limited practice they must have had. The Eastern team needs a new captain; 'Smiling' O'Brien kicks too much and as for George Wildin, he is O.K. but he won't do."

W. H. Sagstetter, master mechanic, Kansas City Southern—"Sure, we enjoyed it, but it all goes to show that the Western boys are not only superior in mechanical matters as we all know, but they play better ball. The contest, best of all, showed cleanness and good fellowship, and these annual games should be encouraged."

W. M. Bosworth, mechanical engineer of the Kansas City Southern—"Wildin certainly played a 'peach' of a game; it was greatly enjoyed by the audience. Beaumont in center did good work; Bradford used his head at all times and should have had better support. O'Brien's playing was that of some ball player and if he ever comes west we would like to have him on the Western team."

W. May, master mechanic of the C. C. C. & St. L.—"It was a shame to see those eastern boys beaten; they were such nice boys. Their defeat was due to the fact that they didn't make use of the 'big stick' presented to Captain Wildin."

T. T. Cloward, P. B. T. W.—"The first part was all right and I looked for a close fight and a big score. The fielding errors and lack of team work lost the day for the Eastern boys; the lack of practice together was, of course, not their fault. I hope the game once a year will be continued."

#### M. M. REGISTRATION.

Allen, C. W., Shelburne.

Alling, Edw. W., M. M., N. Y., N. H. & H. R. R.

Averill, E. A., Amer. Engr., Traymore.

Barton, T. F., M. M., D. L. & W. R. R., Haddon Hall.

Bawden, Wm., M. M., Terminal R. R. Association of St. Louis, Watkins.

Bell, J. Snowden, Asst. Member, Jackson.

Bentley, H. T., P. A. S. M. P., C. & N. W. Ry., Marlborough-Blenheim.

Best, W. N., Engineer in Caloric, Shelburne.

Boughton, Wm., Locomotive Superheater Co., Marlborough-Blenheim.

Brangs, P. H., Arlington.

Brazier, F. W., S. R. S., N. Y. C. & H. R. R. R.

Brewer, J. W., M. M., B. & O. R. R., Dennis.

Brown, M. G., S. M. Power, Gulf & Ship Island R. R., Haddon Hall.

Buchanan, A. Jr., Public Service Commission, Lexington.

Burton, T. L., Westinghouse Air Brake Co., Marlborough-Blenheim.

Bussing, G. H., S. M. P. & R. S., B. & S. Ry., Haddon Hall.

Chamberlin, E., Mgr. Equipment Clearing House, N. Y. C. Lines, Marlborough-Blenheim.

Chambers, C. E., S. M. P., C. R. R. of N. J., Dennis.

Chester, W. E., St. Charles.

Clark, J. H., M. M., Staten Island Rapid Transit Ry. Co., Marlborough-Blenheim.

Cole, F. J., C. C. E., American Loco. Co., Marlborough-Blenheim.

Conniff, P., M. M., B. & O. R. R., Lexington.

Contant, M. R., M. M., Nester & Delaware, Shelburne.

Cromwell, Oliver C., M. E., B. & O. R. R., Marlborough-Blenheim.

Currie, H. A., Ass't. Elec. Eng. N. Y. C. & H. R. C., N. Y. C. R. R., Dennis.

Darlow, A. M., M. E. & Gen'l. St. Keeper, Buffalo & Susquehanna R. R., Haddon Hall.

Davis, John E., M. M., Hocking Valley R. R., Traymore.

DeVoy, J. F., A. S. M. P., Chgo., Mil. & St. Paul Ry. Co., Shelburne.

Dolan, John P., M. M., St. Louis & North Ark. R. R.,

Dolan, S. M., M. M., Marlborough-Blenheim.

Doooley, William H., M. M., C. N. O. & T. P. Ry., Dennis.

Dowd, Willard, Shop Engineer, Illinois Central, Dennis.

Dreyfus, T. F., M. M., B. & O. R. R., Traymore.

Egbers, G. F., M. M., Northern Pacific Ry. Co., Chalfonte.

Emory, John B., M. M., Texarkana & Ft. Smith Ry., States Villa.

Endsley, Prof. L. E., Purdue University, Chalfonte.

Fetner, W. H., M. M., Central of Georgia Ry., Chalfonte.

Finley, J. B., Ass't Gen. Sup., S. P. of Mex. & Sonora Ry., Chelsea.

Fitzgerald, D. E., A. S. M. P., St. Louis & San Francisco R. R., Haddon Hall.

Flory, B. P., S. M. P., N. Y., O. & W. R. R., Marlborough-Blenheim.

Fogg, J. W., M. M., B. & O., Chg. Term. Ry., Chalfonte.

Forsyth, Wm., M. E., (Associate Member), Railway Age Gazette, Marlborough-Blenheim.

Fowler, Geo. L., Dennis.

Gaines, F. F., S. M. P., Central of Ga. Ry., Dennis.

Garstang, Wm., S. M. P., C. C. & St. L. Ry.

Gentry, T. W., American Loco. Co., Wiltshire.

Glass, John C., M. M., Penna. Ry., 21 Illinois Ave.

Gould, Jos. E., S. M. P., Norfolk & Southern Ry., Dennis.

Graburn, A. L., M. E., Can. Nor. Ry., Traymore.

Graham, H. E., Supt., Pittsburgh, Allegheny & McKees Rocks R. R., Young's.

Graham, J. A., Strand.

Greenwood, H. F., Gen'l Foreman, Norfolk & Western Ry., Strand.

Haig, M. H., M. E., A. T. & S. F. Ry., Traymore.

Hale, H. H., M. M., C. H. & D. Ry., Haddon Hall.

Harris, C. M., M. M., Washington Terminal R. R., Traymore.

Hatch, M. C. M., Supt. Fuel Service, D. L. & W. R. R., Traymore.

Hawkins, B. H., D. M. M., D. L. & W. R. R., Traymore.

Henshaw, J. E., Shop Supt., St. L. & S. F. R. R., Haddon Hall.

Hyndman, F. T., Marlborough-Blenheim.

Joughins, G. R., M. S., Intercolonial Ry., Chalfonte.

Kautmann, A. G., Supt. Mach., N. C. & St. L. Ry., Runnymede.

Kellogg, D. P., Shop Supt., S. P., Haddon Hall.

Kellogg, W. L., S. M. P., C. H. & D. Ry., Haddon Hall.

Kilpatrick, J. B., Mech. Supt., C. R. I. & P. Ry., Traymore.

Kilpatrick, R. F., Elwald Iron Co., Chalfonte.

Kinney, C. D., M. M., Kanawha & Mich. Ry., Traymore.

Kinney, M. A., S. M. P., Hocking Valley Ry., Traymore.

Kirkpatrick, James, M. M., Baltimore & Ohio, Lexington.

Knight, Wm. Edward, S. M. P. & S., Cuba R. R., Traymore.

Kyle, C. M., M. M., Canadian Pacific Ry., Haddon Hall.

Lide, C. D., M. M., Carolina & Northwestern Ry., Aerial.

Little, J. C., M. E., Chicago & Northwestern Ry., Young's.

Lovell, Alfred, Traymore.

Machesney, A. G., Baldwin Locomotive Works, Pennhurst.

Mackenzie, John, Raymond.

McRae, J. A., Chem. Engr., M. C. R. R., Chalfonte.

McGill, A. M., M. M., Lehigh Valley R. R., Traymore.



McGrath, J. T., S. M. P., Chicago & Alton Ry., Marlborough-Blenheim.  
 May, Walter, M. M., C. C. C. & St. L. Ry., Chalfonte.  
 Meade, P. J., M. M., Atlantic Coast Line R. R., Lexington.  
 Minshull, P. H., M. M., N. Y. O. & W. R. R. Co., Traymore.  
 Mirtz, P. P., M. E., L. S. & M. S., Traymore.  
 Monhouse, H., Rome Loco. & Mach. Works, Chalfonte.  
 Montgomery, Hugh, S. M. P., Bangor & Aroostook R. R., Dennis.  
 Montgomery H., M. M., Penna. R. R., Borton.  
 Moore, B. R., S. M. P., Duluth & Iron Range R. R., Traymore.  
 Morris, W. D., C. & O. R. R., Shelburne.  
 Mowery, J. N., M. M., N. Y. N. H. & H. R. R., Chalfonte.  
 New, W. E., M. M., K. C. Belt Ry., Chalfonte.  
 O'Neill, W. J., M. M., C. R. I. & P., Lexington.  
 Osborne, Harry J., M. M., C. R. I. & P., Haddon Hall.  
 Oviatt, H. C., Gen. Insp., N. Y. N. H. & H. R. R., Strand.  
 Pfahler, F. P., M. E., Wheeling & Lake Erie R. R., Wiltshire.  
 Phillips, C., M. M., N. O. & N. E. & A. & V. Ry., Brighton.  
 Platt, Jno. G., Dennis.  
 Powers, M. J., M. M., Denver & Rio Grande Arlington.  
 Prendergast, Jas. F., M. M., B. & O. R. R., Traymore.  
 Quigley, Joseph, M. M., C. N. O. & T. P. Ry., Dennis.  
 Ramage, J. C., Supt. Tests, Southern Ry., New Berkley.  
 Redding, D. J., M. M., Pittsburg & Lake Erie R. R. Co., Traymore.  
 Reid, H. G., M. M., Can. Pac. Ry., Haddon Hall.  
 Reynolds, O. H., Ry. Rep., Jessup Steel Co., Pennhurst.  
 Rhodes, L. B., Chalfonte.  
 Riley, Geo. N., Supt. Motion Power, McKeesport Connecting Co., Marlborough-Blenheim.  
 Roope, Thos., S. M. P., C., B. & O. Ry., Traymore.  
 Rossing, W. H. P., Asst. to G. M., St. L. & S. F. Ry., Marlborough-Blenheim.  
 Sagstetter, W. H., M. M., Kansas City Southern, Shelburne.  
 Schwartz, C. L., A. G. M., St. Louis Refer. Car Co., Young's.  
 Seidel, Geo. W., Supt. Silves Shops, C. R. I. & P. Ry., Traymore.  
 Sharp, C. L., Gen'l. For., Rock Island Shops, Lexington.  
 Sheafe, J. S., Engr. Tests, Illinois Cent., Traymore.  
 Shepard, L. A., Atha Steel Castings Co., Brighton.  
 Shoemaker, H., Shop Supt., N. Y. O. & W. R. R., Traymore.  
 Sinclair, Angus, Haddon Hall.  
 Smith, R. D., S. M. P. & R. S., Boston & Albany R. R., Dennis.  
 Smith, W. T., M. M., Chesapeake & Ohio Ry. Co., Dennis.  
 Sprowl, N. E., Shop Supt., Atlantic Coast Line R. R., Young's.  
 Stewart, A. F., M. M., Chesapeake & Ohio Ry., Traymore.  
 Storey, J. W., C. D., Central of Georgia Ry., Young's.  
 Stubbs, G. W., Repr., M. M., Gulf Line Ry., Lexington.  
 Sullivan, J. J., G. M. M., L. & N. Ry., Dunlop.  
 Sweeley, E. H., G. F. L. R., Long Island R. R., Shelburne.  
 Swoyer, H., Manager, American Loco. Co. Brooks Wks.  
 Taylor, Wm. Lucile, C. R. I. & P. R. R.  
 Thayer, F. C., G. R. F. E., Southern Ry., Dennis.  
 Thomson, S. G., S. M. P. & R. E., Philadelphia & Reading Ry., Lennox Apts.  
 Tinker, J. H., Div. M. M., C. & E. I. R. R., Strand.  
 Todd, Louis C., C. M. M., Boston & Maine R. R. Co., Young's.  
 Tonge, John, Chalfonte.  
 Turner, Amos, M. M., Lehigh Valley R. R. Co., Lexington.  
 Van Buskirk, H. C., S. M. P., C. & S. Ry., Chalfonte.  
 VanValin, H. D., Baltimore & Ohio R. R.  
 Wahlen, John, M. M., Montpelier & Wells River R. R., Lexington.  
 Walsh, J. F., G. S. M. P., Chesapeake & Ohio Ry. Co., Marlborough-Blenheim.  
 Warnock, Harry R., G. F. L. D., Monongahela R. R., Francis.  
 Weisberger, E. L., M. M., Baltimore & Ohio R. R., Lexington.  
 Williams, E. A., Traymore.  
 Williams, F. H., M. M., C. R. I. & G. Ry.  
 Wilson, G. M., M. M., Buffalo & Susquehanna R. R.  
 Wright, R. V., Chalfonte.  
 Wyman, R. L., M. M., Lehigh & New England R. R., Pennhurst.  
 Young, Chas. D., A. E. M. P., Pennsylvania Lines West, Brighton.

#### M. M. GUESTS.

Bertin, Michel J. A., Special Apprentice, P. R. R., Altoona, Young's.  
 Boyer, C. W., Ass't Foreman Erecting Shop, P. R. R., Trenton N. J., Whittle.  
 Burkhardt, A. A., Gen'l Car For., N. Y. C. & H. R. R. Co., Pennhurst.  
 Burkhardt, Master James, Pennhurst.  
 Butterworth, J. A., Purchasing Agt's Office, Southern Ry., Traymore.  
 Coyle, G. W., Engineer, B. & O., Barthram.

Crawford, M. R., Gen'l Foreman, C. R. R. of N. J., Louvan.  
 Esterbrook, W. H., Master Painter, Public Service Ryws. Co., Bothwell.  
 Fisher, A. W., Signal Dept., P. R. R., Borton.  
 Garland, A. R., Pur. Agt. Office, P. R. R.  
 Gill, James J., Insp. Public Cons., Lexington.  
 Gsantner, O. C.  
 Hemming, S. V., Chemist & Eng. Tests, American Loco. Wks., Traymore.  
 Hinkens, E. H., Genl. Foreman, B. & O., Shelburne.  
 Jackson, W. S., Sec. y. to S. M. P., Penna. R. R., Chafonte.  
 Jeffrey, Thos., Genl. Piece Work Ins., D. L. & W., Shelburne.  
 Keller, G. W., Erecting Shop Foreman, Norfolk & Western Strand.  
 Lewis, A. W., Chief Material Insp., Norfolk & Western, Marlborough-Blenheim.  
 McCormick, C. C., Insp. Purchasing Dept., P. R. R., Dennis.  
 McKelven, W. D., Gen'l Foreman, P. R. R., Raymond.  
 McGill, A. Nelson, L. V., Traymore.  
 Mayer, Frank, Gen. M. B. M., Southern Ry., Pennhurst.  
 Merz, Chas. B., C. C. Pur. Dept., C. T. H. & S. E. Ry., Young's.  
 Moore, R. P., Pur. Agt., Duluth & Iron Range, Traymore.  
 Norton, A. W., Draughtsman, B. & O., Kenderton.  
 Orr, J. J., F. B. M., Lackawanna, Dennis.  
 Pattison, J. H., M. S. F., Norfolk & Western, Strand.  
 Porter, Allen, Sup., P. R. R.  
 Rafters, C. D., Foreman, P. R. R., Rafters.  
 Rhodes, Robt. S., Elec. Dept., N. Y. C., Runnymede.  
 Richardson, E. L., Gen. Foreman, N. & W., Strand.  
 Roberts, G. S., Machinist, Penna. R. R., Haddon Hall.  
 Robertson, A. W., Ck., Pur. Dept., D. L. & W. R. R., Netherland.  
 Rule, Geo., Engineer, B. & O., Barthram.  
 Salisbury, R. W., W. P. Insp., B. & O., Haddon Hall.  
 Scheifele, John, Asst. Rd. For. of Engines, P. & R. Ry., Ariel.  
 Schramm, T. J., Chief Clerk, G. S. M. P., D. L. & W., Shelburne.  
 Shaffer, C. A., Gen. Insp. of Tools, Ill. Central, Dennis.  
 Shay, T. M., Gen. Pass. Car Foreman, B. & O., Haddon Hall.  
 Shelhorn, Otto, Ord. Dept., U. S. Gov't, Lexington.  
 Shoester, Geo. W., For. of Electricians, P. R. R., Fontenanck.  
 Sisler, Lester, Chief Clerk, Interstate Com. Com., Haddon Hall.  
 Spratt, T., Asst. Pur. Agent, Norfolk & Western Ry., Traymore.  
 Stickley, T. W., Genl. Fore., Norfolk Southern, Arlington.  
 Town, Col. Thos. J. (Guest of J. Snowden Bell), Berkshire Inn.  
 Waldo, Dr. Leonard, Consulting Engineer, Shelburne.  
 White, H. M., Engineer, B. & O., Barthram.  
 White, R. H., Engr. Machinery, Amer. Loco. Works, Traymore.  
 Wortham, E. S., Asst. to V. P., C. & O., Chalfonte.

#### M. C. B. GUESTS.

Beatty, J. B., Chief Clerk Car Dept., Penna. R. R., Dunlop.  
 Beckam, R. F., Chief Clerk to Auditor of Disbursements, Southern, St. James.  
 Bower, W. C., P. A., N. Y. Central, Shelburne.  
 Boyce, W. D., M. E., Chalfonte.  
 Cloward, T. T., Gen. Foreman, Loco. Dept., Penna. R. R., Haddon Hall.  
 Cotton, W. A., Chief Clerk to Mech. Supt., Erie R. R., Marlborough-Blenheim.  
 Derby, W. A., Eng. Tests, C. B. & O., Chalfonte.  
 English, G. H. B., Supervisor, P. B. & W. Ry.  
 French, E. L., Gang Foreman, P. R. R., Devonshire.  
 Furrer, O. B., Sten. to Eng. Tests, P. R. R., Traymore.  
 Gearhart, J. F., Master Painter, P. R. R., Dunlop.  
 Goodfellow, T. F., Inspec. Tests, P. R. R., Traymore.  
 Henry, H. B., Statistician, Union Pacific, Brighton.  
 Hickman, A. V., Chief Clerk A. S. M. P., Norfolk & Western, Iroquois.  
 Jellison, B. T., P. A., C. & O., Marlborough-Blenheim.  
 Kinter, J. H., Foreman Frt. Car Inspection, Penna. R. R., Edna.  
 Lowther, L. W., Machinist, D. L. & W. R. R., Runnymede.  
 Luke, W. J., Gen'l Storekeeper, Norfolk Southern, Dunlop.  
 Lyons, Jas., Foreman P. R. R., Chalfonte.  
 Mahon, W. J., St. Charles.  
 McCracken, J. T., Master Painter, Interboro R. T. Co., Dunlop.  
 Minshall, P. H., M. M., N. Y. O. & W., Traymore.  
 Monroe, R. C., Car Engr., N. P. & S. P., Chalfonte.  
 Nutt, A. S., St. Louis Term. R. R., Beauvier.  
 O'Neill, J. F., Air Brake Instructor, Penna. R. R., Delaware City.  
 Partlock, W. M., Gen. Store Keeper, Seaboard Air Line, Young's.  
 Phipps, J. W., Air Brake Insp., B. & O., Islesworth.  
 Reifsteck, A. W., Secy. to G. S. M. P., J. C. R. R., Young's.  
 Robbins, Felix, Marlborough-Blenheim.  
 Rogers, C. J., Stk., D. L. & W., Bothwell.  
 Small, J. F., Chief Clerk P. A., Norfolk Southern, Dunlop.

Waters, John H., Ass't. M. M., Georgia R. R., Brighton.  
 Wertz, Cyrus, For. Painter, Reading Ry.; Risley.  
 Wolf, John D., For. Painter, Reading, Risley.  
 Wood, H. G., Chief Clerk, Pur. Agt., Seaboard Air Line,  
 Young's.  
 Wright, F. H., For. Elec., N. Y. Central, Marlborough-Blen-  
 heim.

#### J. F. WALSH TO RETIRE.

J. F. Walsh, general superintendent of motive power of the Chesapeake & Ohio, who is one of the most widely known men attending the conventions, announces that he intends to retire on July 1. He may continue to act in a consulting capacity for the C. & O., but his chief business in future will be to rest and enjoy himself.

#### PACIFIC TYPE LOCOMOTIVE, LOUISVILLE & NASHVILLE.

Following its usual custom of building all locomotives at its own shops, the Louisville & Nashville has just completed five passenger engines of the Pacific type at South Louisville, making thirty-eight locomotives built at this point since July 1, 1911. These engines were designed in the office of the mechanical engineer of the road and are a development of the locomotives of the same type now in service.

As will be seen by reference to the illustration, they follow modern practice in every particular. Probably the most striking feature is the very deep throat sheet which permits a liberal depth under the brick arch. This arrangement has necessitated the use of a "broken" grate that follows the lines of the mudring. Inasmuch as an arch fitting close to the flue sheet and extending well back and up in the firebox is used, the usual undesirable result of a grate of this form is overcome.

In general the boiler follows conservative practice, having 154 2¼-in. tubes, 18 ft. 6 in. in length. In addition there are 21 5½-in. flues for the superheater elements. This gives

2215 sq. ft. of heating surface in the tubes and flues. The firebox, including the arch tubes, has 229.7 sq. ft., making a total heating surface of 2444.7 sq. ft., or a ratio of 54.3 sq. ft. of heating surface to each square foot of grate area. Considering each square foot of superheater heating surface as being equivalent to 1.5 sq. ft. of evaporative heating surface the equivalent heating surface of the boiler is 2978.7 sq. ft., which gives a ratio to the 45 sq. ft. of grate area of 66.2 to 1. The superheater is of the Schmidt type.

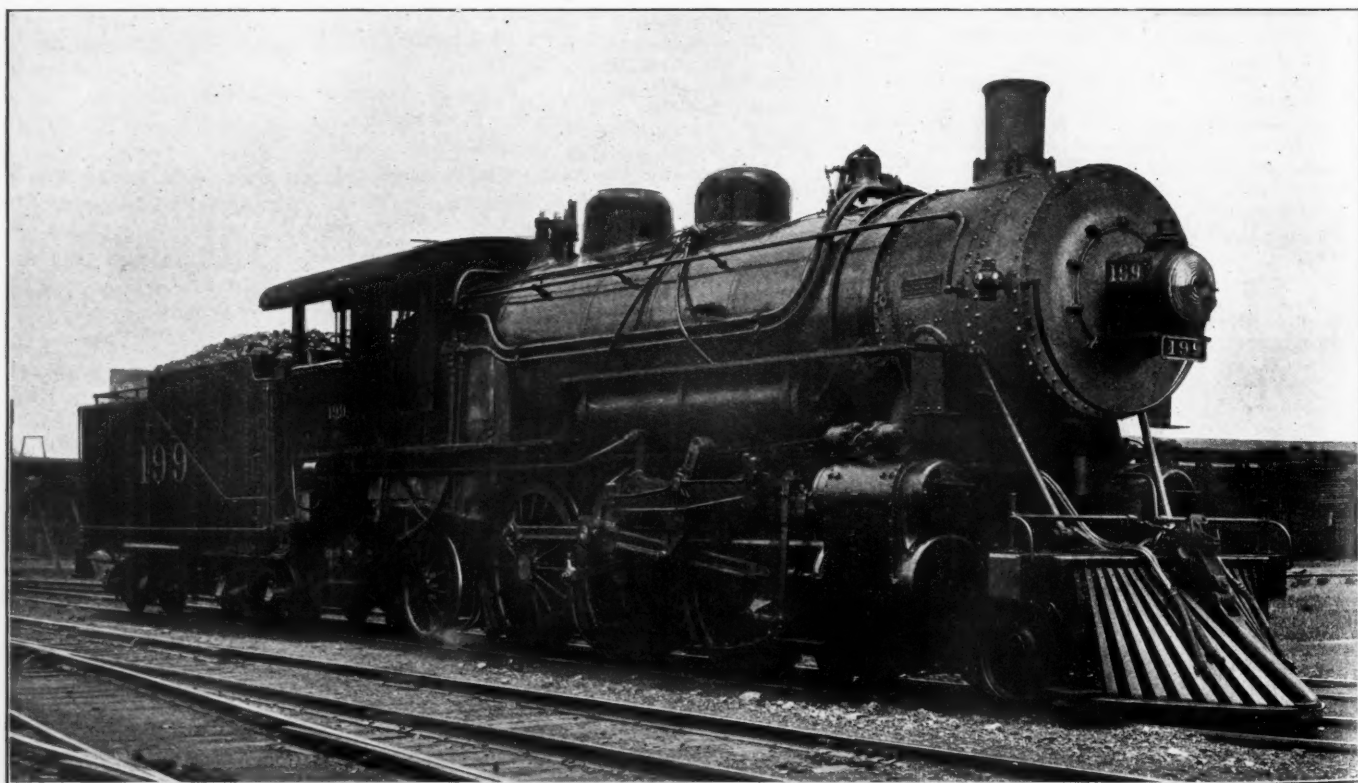
Outside steam pipes of the type now being so generally used in connection with superheater locomotives are employed in this case. The piston valves, 12 in. diameter, are operated by a design of Walschaert valve gear that has proved satisfactory on previous locomotives. The valves have 6¾-in. travel, 1½-in. exhaust clearance, and are set with a ¼-in. lead.

It will be noted that both injectors are on the right hand side and feed into a double check valve placed on the top center line of the boiler very near the front tube sheet. This check discharges on a baffle plate which distributes the feed water over a considerable area. Also, in this connection it will be noted that the relative arrangements of the dome, sand box and bell have been studied to give the best general appearance, and that the locomotive as a whole presents a smooth, well balanced effect. The location of the headlight at the center of the front end is in keeping with this idea. The headlight is oil burning and is provided with a fresnel lens of a design developed by the Dressell Railway Lamp Works.

The introduction of these locomotives in service has permitted the operation of 12-car passenger trains, while the previous engines, which were but 15,500 lbs. lighter, were able to handle but nine cars. They, however, were not equipped with superheaters and brick arches.

The general dimensions and weights of the new K 3 class are as follows:

Traction effort .....	30,205 lbs.
Cylinders, bushed .....	21½ in. x 28 in.
Boiler, type .....	Straight top.
Boiler, minimum diameter .....	71 in.



Locomotive Designed and Built by the Louisville & Nashville.



Boiler, working pressure .....	190 lbs.
Tubes, number .....	21 and 154.
Tubes, diameter .....	5½ in. and 2¼ in.
Tubes, length .....	18 ft. 6 in.
Firebox, size .....	72¼ in. and 90¼ in.
Firebox, water space—S. and B., 3½ in. ....	F. 4 in.
Grate area .....	45 sq. ft.
Fuel .....	Soft coal.
Heating surface, firebox .....	210 sq. ft.
Heating surface, tubes, 2¼ in. ....	1,648 sq. ft.
Heating surface, flues, 5½ in. ....	367 sq. ft.
Heating surface, arch tubes .....	19.7 sq. ft.
Heating surface, superheater .....	356 sq. ft.
Driving wheels, diameter .....	69 in.
Driving journals .....	9 in. and 9½ in. x 12 in.
Engine truck wheels, diameter .....	33 in.
Engine truck journals .....	5½ in. x 11 in.
Trailer wheels, diameter .....	49 in.
Trailer wheels, journals .....	7 in. x 14 in.
Weight, on driving wheels .....	131,000 lbs.
Weight, engine .....	211,500 lbs.
Weight, engine and tender .....	354,900 lbs.
Wheel base, driving .....	12 ft.
Wheel base, total, engine .....	30 ft. 7 in.
Wheel base, total, engine and tender .....	62 ft. 9½ in.
Tender wheels, diameter .....	33 in.
Tender journals .....	5½ in. x 10 in.
Tender capacity, water .....	7,000 gals.
Tender capacity, coal .....	15 tons.

#### SUPERHEATED STEAM AND THE LARGE LOCOMOTIVE.

The introduction of superheated steam in railway service has made larger locomotives possible. The final capacity of a locomotive is limited by the ability of the fireman to properly supply coal to the firebox, more than by the clearance limitations of the right of way. Before the adaptation of superheated steam to the locomotive the limit in size and capacity, based on the ability of the fireman to supply the engine with fuel, had been practically reached. The use of superheated steam, however, has made it possible to extend these limits from 20 per cent. to 40 per cent.

An interesting method of illustrating the manner in which this increase has been effected is by the following example: Assume two locomotives, one using saturated steam and the other superheated steam, each burning 6000 lbs. of coal an hour. Suppose the superheated steam locomotive burns 4 lbs. of coal an hour to develop one horsepower. The locomotive equipped with a superheater furnishing highly superheated steam will develop the same power on 3 lbs. of coal, a saving of 25 per cent. The saturated locomotive will thus develop 1500 horsepower, but the superheater locomotive will develop 2000 horsepower. The difference in the power developed is 500 horsepower or a 33½ per cent. increase in hauling power for the same amount of fuel consumed.

From this it is readily seen that in locomotive practice the capacity increases much more rapidly than the coal saving upon which it is dependent. The work done per ton of coal is what actually counts in the reduction of the cost of transportation. It will also be noted that this increase in capacity or hauling power has been effected without any increase in actual coal consumption; that is, the fireman in handling an engine equipped with a superheater, producing steam at a temperature of from 600 to 650 deg. with the increased capacity, is doing it with no more effort than it was necessary to expend in firing the saturated steam engine.

#### SUPPLYMEN'S ANNUAL MEETING.

The annual meeting of the Railway Supply Manufacturers' Association was held Saturday morning in Convention Hall, with president Stafford in the chair. There was a thoroughly representative attendance when the meeting was called to order.

In his opening address, president Stafford spoke of the foresight of the association in establishing a permanent secretary's office and told how it had resulted in the accumulation of correspondence, agreements, contracts and other data that is now almost indispensable to planning and carrying out the work of the constantly changing executive administration. He next commended the efficient work of the outgoing executive and other committees, and of the vice-presi-

dent and treasurer, and commented on the change of policy due to the demand of the two railway associations that certain practices heretofore recognized as standard be modified and told of the efforts made by the executive committee to conform to the wishes of the parent organizations in both letter and spirit.

Mr. Stafford gave some interesting figures covering the exhibits and membership of the association. This year the space on the Million Dollar Pier occupied by exhibitors is 83,507 sq. ft., as against 76,830 in 1911. The track exhibits compare favorably with those of a year ago. This year the membership of the association is composed of 270 exhibitors and 225 non-exhibitors, as against 245 of the former and 209 of the latter in 1911. The number of non-exhibitors this year may be increased before the end of the convention. Although more exhibit space was provided this year, something like 100 possible exhibitors could not be accommodated.

In telling about this year's exhibits, Mr. Stafford went out of his way to thank the exhibit committee for its part and to express to all exhibitors his appreciation, and the appreciation of the exhibit committee, individually and collectively, for their hearty coöperation.

The finances of the association are in a healthy condition.

Following the president's address, C. S. Storrs introduced a resolution so amending the final paragraphs of Section 7, Article I, of bylaws of the association as to make it read as follows:

"After the executive committee shall have fixed this surplus amount, any money in its hands in excess of same may be returned to the members pro rata upon their payments for dues, badges and exhibit space." The resolution was adopted unanimously.

The object in adding the word "badges" to Section 7, Article I, of the bylaws, was as president Stafford pointed out in his address, to make it possible to include in the rebates to members any of the surplus derived from the sale of extra badges; and thus permit non-exhibiting members to share in that rebate.

On the subject of elections to the executive committee by voting members in the various districts, Scott Blewett spoke strongly in favor of making every effort to arouse greater interest at such elections. His remarks were approved by other speakers.

Elections of members of the executive committee, which were held Friday in the various districts, each member to serve three years, were reported as follows and duly approved: First district, Fred. M. Nellis, Westinghouse Air Brake Co., Boston, Mass.; Second district, Oscar F. Ostby, Commercial Acetylene Co., New York; Fourth district, J. C. Whitridge, Buckeye Steel Castings Co., Columbus, Ohio; Seventh district, S. M. Dolan, American Car & Foundry Co., St. Louis, Mo.

The nominating committee for officers to serve for the ensuing year reported as follows: For president, Samuel G. Allen, vice-president of the Franklin Railway Supply Company, New York; and for vice-president, B. A. Hageman, Jr., president of the U. S. Metal & Manufacturing Company, New York.

The secretary was instructed to cast the unanimous ballot of the meeting for these officers.

A rising vote of thanks was tendered President Stafford for his successful administration.

H. C. Manchester, superintendent of motive power and equipment of the Delaware, Lackawanna & Western, is attending the conventions and is accompanied by his daughter. He is looking forward to the arrival of several Pacific type locomotives that are going to make Pocono Mountain look like a mole-hill. These engines are the heaviest of this type yet built by the American Locomotive Company, with the exception of the experimental engine built for the Pennsylvania. One of them is to be equipped with a brick arch.

## Conventionalities.

J. W. Faessler, of Boss expander fame, is here again this year, as is the real "Boss"—Mrs. Faessler.

E. W. Summers and Frederick Schaefer, of the Summers Steel Car Company, arrived Saturday afternoon.

G. P. Warner, general sales manager of the Pratt & Letchworth Company, has been called away unexpectedly.

James Hopkins, president of the Camel Company, arrived the latter part of last week, and is at the Marlborough-Blenheim.

P. B. Lameroux, the malleable iron man who made Beaver Dam famous, is circulating among his friends here at the convention.

They say that for the first time in the history of these conventions George N. VanSweringen's sartorial outfit has proven incomplete.

Among the familiar faces we notice Mr. and Mrs. O. M. Edwards and Mr. and Mrs. E. F. Chaffee. They are staying at the Marlborough-Blenheim.

"Doc" Bateman's face has worn the brand of smile that won't come off ever since Saturday morning, when Mrs. Bateman and the kids got here.

H. H. Schroyer, of the Acme Supply Company, and H. U. Morton, of the General Railway Supply Company, have been called to Chicago by press of business.

Roland Gerry, assistant general sales manager of the Jones & Laughlin Steel Company, is registered at the Marlborough-Blenheim and will remain until the end of the convention.

S. M. Rogers, vice-president of the Elgin, Joliet & Eastern, arrived the latter part of last week, and has been inspecting the exhibits. Mr. Rogers is at the Marlborough-Blenheim.

Mrs. A. L. Graburn, wife of the mechanical engineer of the Canadian Northern, is attending the convention this year for the first time. She and Mr. Graburn are staying at the Traymore.

Dr. W. F. M. Goss is expected to-day. Following the close of the conventions he will be at Coatesville in charge of the low water tests that are to be made there on Thursday.

S. B. Wight, general purchasing agent of the New York Central Lines, registered at the Marlborough-Blenheim Friday and proceeded to make a critical examination of the exhibits.

Robert A. Flum, of the McCord Manufacturing Company, is attending the conventions and is registered at the Brighton. He has recently changed the location of his headquarters from Detroit to Chicago.

Senator Lorimer, of Illinois, who is president of the Railway Utilities Company, arrived on Saturday, together with Mr. and Mrs. Gallagher, and will remain several days. They are stopping at the Hotel Dennis.

W. J. Eddy, formerly tool room supervisor of the Erie and now holding a similar position on the Rock Island, where he is engaged in installing a standard practice card system, is in attendance at the conventions.

The major leaguers are not the only baseball aggregations that have enthusiastic followers. Billy Dee, the animated disciple of anti-Pluvius creed has flown in from Detroit to give us an imitation of Hughey Jennings having a spasm on the side lines.

F. C. Thayer, general road foreman of engines of the Southern, is stopping at the Dennis with Mrs. Thayer. Mr. Thayer is a past president of the Traveling Engineers' Association and makes it a point to attend the Master Mechanics' Conventions each year.

M. H. Haig, mechanical engineer of the Atchison, Topeka & Santa Fe, arrived on Saturday. Mr. Haig is chairman of the committee on flange lubrication, which will make its re-

port at Wednesday's meeting. He is stopping at the Traymore.

P. P. Mirtz, mechanical engineer of the Lake Shore & Michigan Southern, a member of both the M. C. B. and M. M. Associations, is attending the convention for the first time. He is accompanied by Mrs. Mirtz and is stopping at the Traymore.

W. E. Knight, superintendent of motive power of the Cuba Railroad, is stopping at the Traymore with Mrs. Knight and their two boys. Mr. Knight plans his vacations so as to attend these conventions. He will leave for New York to-day or to-morrow.

Robert Quayle, superintendent of motive power and machinery of the Chicago & North Western, will not attend the convention this year. So many of the mechanical department officers of that road are here that Mr. Quayle thought he had better stay at home and keep things going.

C. W. Seddon, superintendent of motive power of the Duluth, Missabe & Northern, who is attending the conventions, is delighted with the way in which his ideas of a boiler feed device were received by the members of the Master Boiler Makers' Association at the recent convention in Pittsburgh.

S. K. Dickerson, of the Lake Shore, came to Atlantic City with a brand new cane. After carrying it about for two days and getting on the verge of nervous prostration trying to keep track of it, he begged Lee Parish to take it off his hands. That explains why Lee is sporting the new stick.

In recognizing the work of Oscar F. Ostby, by making him a member of the executive committee for the next three years, the Railway Supply Manufacturers' Association has properly rewarded one who has worked hard at a most thankless task. No one covets the job of chairman of the enrollment committee.

W. F. Richards of the Gould Coupler Company is stopping at the Chalfonte with his two daughters, Misses Marie and Thelma. This is Miss Marie's third convention and Miss Thelma's first. Miss Thelma is attending a young ladies college at Buffalo; but the term fortunately ended in time for her to get to the convention this year.

F. F. Gaines, superintendent of motive power of the Central of Georgia, stands ready to talk combustion and locomotive firebox design with anyone interested in the subject. His type of firebox has been incorporated, in connection with a Security brick arch, in the boiler for the Virginian Mallets—the largest boiler ever built.

For the first time in seventeen years, George Basford will miss a convention of the Master Mechanics' Association. Pressure of business is responsible for his absence. His friends will be interested to know that he recently bought a 54 ft. cruising motor boat, bringing it from Port Clinton, Ohio, to New York over the Great Lakes, through the canal from Buffalo to Albany, and down the Hudson. The trip took about eight days.

It seems that J. H. Sanford, purchasing agent of the New Haven, declined to come to Atlantic City for fear he would be seen talking to George Wildin and thereby lose what reputation he now has. Sanford's anxiety is based on the recent arrest and conviction of Wildin for driving an automobile within the New Haven city limits with the muffler cut out. According to Sanford, Wildin was fined \$15.55; and he adds that he wishes it was ten times that amount.

Among the special guests at the M. C. B. convention are the following members of the Master Car and Locomotive Painters' Association: President, J. T. McCracken, Interboro Rapid Transit; H. M. Butts, New York Central & Hudson River; George Drolette, Buffalo, Rochester & Pittsburgh; John Gearhart, Pennsylvania; D. A. Little, Pennsylvania; B. E. Miller, Delaware, Lackawanna & Western, and John D. Wright, Baltimore & Ohio. These men are very active in the Master Painters' Association and hope to attend the M. C. B. conventions every year.



## The Exhibit.

The Missouri Pacific has ordered from Fairbanks, Morse & Company, Chicago, 50 of its No. 32 gasoline motor cars. This is in addition to a previous order for 40 of the same cars from the same railway.

The Anderson friction draft gear, eliminating bolts, straps and nuts, as shown on the Mid-Western Car Company's steel underframe flat car among the track exhibits, has been inspected critically by many of the railway men. The buffing arrangement is also another point of interest in the car.

Tests of the ruby mica globes made by the Storrs Mica Company, Owego, N. Y., show that they can be subjected to service on lanterns burning continuously for over 700 hours without any sign of deterioration. The company has numerous reports of lanterns fitted with mica globes being dropped from top of car without injury to globes.

The Acme Supply Company's weatherproof window and post, shown in spaces 572 and 573, indicate the best methods of combining their weatherproof window design with post construction. The post battens and envelopes are made to accommodate the window and its fixtures, so as best to accomplish the positive seal of sash by reason of assistance of the natural external air pressure. A complete model showing the wide and narrow post and standard windows is an interesting feature of the exhibit.

The McConway & Torley Company, Pittsburgh, Pa., is showing full size models of its different styles of passenger equipment couplers in exhibit spaces 501, 503, 505. These include the Buhoup 3-stem coupler, the Pitt passenger coupler, and the Janney passenger coupler. The 3-stem equipment is now in service on over 11,000 passenger train cars, and the Pitt passenger coupler on over 3,000 all-steel passenger cars, for which it was especially designed. Over 60 per cent. of the new passenger equipment built in the United States in 1910 and 1911 is said to have been fitted with McConway & Torley couplers.

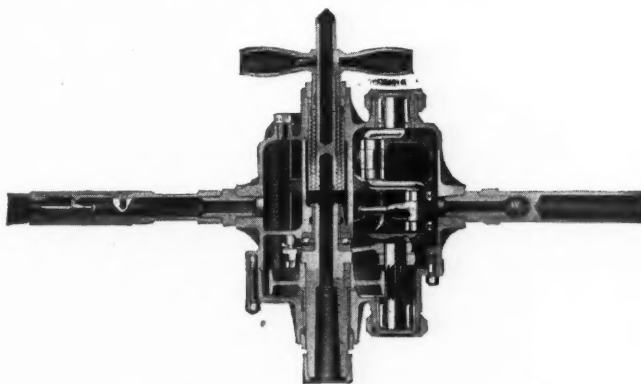
The Pilliod Company, New York, has on hand orders sufficient to keep the plant in operation at full capacity and running 13 hours a day for about two months. The company has recently received orders for gears for 10 Atlantic type locomotives for the New York Central & Hudson River, 40 mikado locomotives for the Chicago, Rock Island & Pacific, 25 Mallet locomotives for the Norfolk & Western, 7 Pacific type locomotives for the Western Maryland, 2 passenger locomotives for the Hocking Valley, 10 mikado locomotives for the Atlanta, Birmingham & Atlantic, one passenger and 2 consolidation locomotives for the Coal & Coke Railway and 5 locomotives for the Richmond, Fredericksburg & Potomac.

On Friday we referred to a device designed to do away with the annoyance of draft and cinders blowing in through the screens of the partially opened windows of passenger cars, shown by the Gold Car Heating & Lighting Company,

New York, at its booth, 301-305. It consists of a narrow curtain wound on a vertical roller set at the side of the window and concealed in the seat back. When not wanted it is rolled back out of the way, but when in use it is drawn across the front of the window and fastened at the opposite side. It performs the same function as the deflector used for house and office windows, turning the incoming draft upwards and away from the passenger.

### ROLLER BEARING AIR DRILL.

A new line of portable drilling machines has been placed on the market by the Independent Pneumatic Tool Company, Chicago. They are known as the Thor roller bearing piston air drills and possess the general features of other Thor drills of this type, such as Corliss valves, telescopic screw feed, removable crank chamber plate and a large air chamber. Although the size of the spindle has been increased the most radical improvement is in the crank shaft bearings, the connecting rods, eccentrics and eccentric straps. The crank shaft has been strengthened and runs in anti-friction roller bearings



The Roller Bearing Piston Air Drill.

which are retained in a brass cage. These rollers run in bushed bearings that are hardened and ground and the end of the crank shaft is rounded so as to reduce the friction where it bears against a hardened plate thrust bearing. On account of the increased size of the crank shaft, the ordinary center bearing is dispensed with and the eccentric is made smaller in diameter and is mounted on the crank shaft. The connecting rod is made in one piece, being similar to that used in the Thor No. 8 and 9 close corner drills. Roller bearings are also provided for the idler gears in the compound drills, and an improved shifter mechanism is used on two-speed machines.

### SAMPSON BOLSTER.

The Sampson bolster, made by the American Steel Foundries, Chicago, is built up, of the Simplex type, and is designed for use on trucks of heavy tenders. With modern tenders having a



Sampson Tender Truck Bolster.

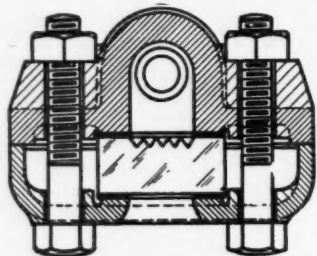
large capacity for fuel and water, the weights carried are so great as to demand a much heavier and stronger bolster than has been found necessary heretofore. This is especially so in the case of tenders for Mallet compound locomotives which frequently weigh 100 tons or more and are sometimes carried on six-wheel trucks. The Sampson bolster has been designed for service of this kind. The compression member is a 15-in. rolled steel I-beam with a rolled steel tension plate; a heavy cast steel king post is used. Bolsters of this type not only provide a structure of great strength vertically to carry the normal load but possess ample strength to resist the transverse blows and shocks due to the inertia of the trucks as well as the stresses resulting from imperfection of the truck and from heavy brake applications which are found in modern railway practice.

#### RAILWAY SIGNAL VOLT-AMMETER.

The General Electric volt-ammeter, type S-2, is a portable instrument of the smallest size consistent with accurate readings, for testing signal circuits in the field. The instruments are made with three volt-ammeter and three ammeter ranges, and either of the following scales may be provided: 150 v., 15 v. and 1.5 v.; 15 amperes, 1.5 amperes and 150 milliamperes; or 150 v., 30 v. and 3 v.; 15 amperes, 3 amperes and 300 milliamperes. Change is made from one range to another by simply turning a button switch on the front of the instrument and without any change of connections. Ammeter readings can be taken on any of the ranges without opening the circuit so that the clearing and hold clear current for a signal can be accurately read. The instrument, which is of pocket size, in a heavy mahogany case, is especially designed for hard usage, being an adaptation of the automobile type with very light moving element. The design is based on the D'Arsonval principle. The instruments are made by the General Electric Company, Schenectady, N. Y.

#### RICHARD KLINGER REFLEX WATER GAGE.

The most recent improvements in the Richard Klinger reflex water gage, type N, manufactured by the Nathan Manufacturing Company, New York, are shown in the illustration. The gage is so constructed that the pressure against the glass is distributed more uniformly and with fewer bolts than is ordinarily the case, insuring tightness under most severe requirements. The casing is simplified and is made strong and stiff to guard against warping. The cap screws ordinarily used



Section Through Klinger Water Gage.

are replaced in this latest pattern by bolts running through the casing, and still further adding to the efficiency and convenience in tightening up the bolts. The nuts rest with the flat sides against corresponding flat sides on the casing and cannot revolve, so that the tightening may be done without and difficulty whatever, by applying an ordinary monkey-wrench to the hexagon heads on the front part of the casing where they are most accessible. These gages are substituted for the ordinary tubular glass gages, and are an absolute protection

to enginemen against injuries from breaking or flying glass, as the glass will not fly out of the casing even if it should break, which very rarely occurs.

#### COMMONWEALTH CAST STEEL ENGINE TRUCK FRAMES.

The Commonwealth cast steel frames for passenger trucks, made by the Commonwealth Steel Company, St. Louis, Mo., are well known on account of their extensive use under Pullman cars, coaches and baggage and express cars. The series of cast steel engine truck frames, here illustrated, are recent designs. In all these designs for engine trucks the pedestals

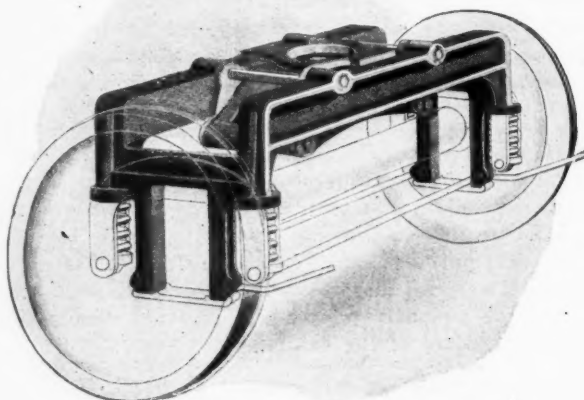


Fig. 1—Easy Riding Pony Truck.

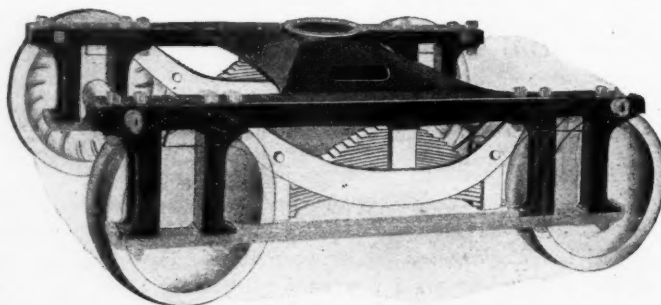


Fig. 2—Easy Riding Rigid Engine Truck.

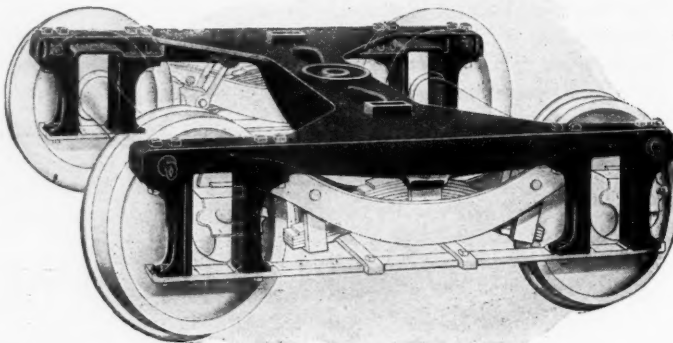


Fig. 3—Non-Derailing Tender Truck.

are cast integral with the wheel piece and transom, and this one casting makes up a large part of the structure required for a complete truck. There are very few pieces, and the number of bolts and rivets is reduced to a minimum and separate braces and gusset plates for holding the truck square are entirely eliminated. For this reason the truck is always maintained square, the cost of maintenance is greatly reduced,



and all the advantages of a square truck are constantly obtained. The flange wear is reduced by this rigid maintenance of the truck alinement. Fig. 1 shows the principle as applied to a pony truck for engines. The pedestals, spring seats and transom are cast in one piece, and in it the pivot bearings are provided for the swinging cradle which supports the center plate. In all these trucks the wearing parts are easily replaced, and they are made adjustable where necessary. Fig. 2 is a

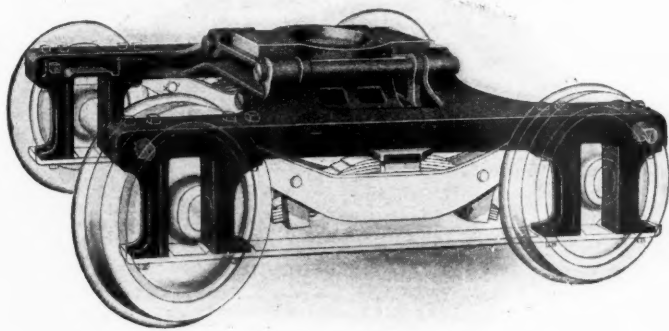


Fig. 4—Easy Riding Swing Motion Engine Truck.

four-wheel rigid engine truck, in which the pedestals, wheel piece, transom and center plate are combined in one piece. Fig. 3 is a somewhat similar design arranged for a tender truck, and Fig. 4 shows the principle as adapted to a four-wheel swing motion engine truck. Here the pivot bearings for the cradle and center plate are cast solid on the transom, as with the pony truck.

#### FERGUSON SUPERHEATER FLUE WELDING FURNACE.

The increased use of locomotive superheaters during the past year or two has created a considerable demand for tools for safe-ending the large tubes used in this equipment. To meet



Ferguson Superheater Flue Welding Furnace.

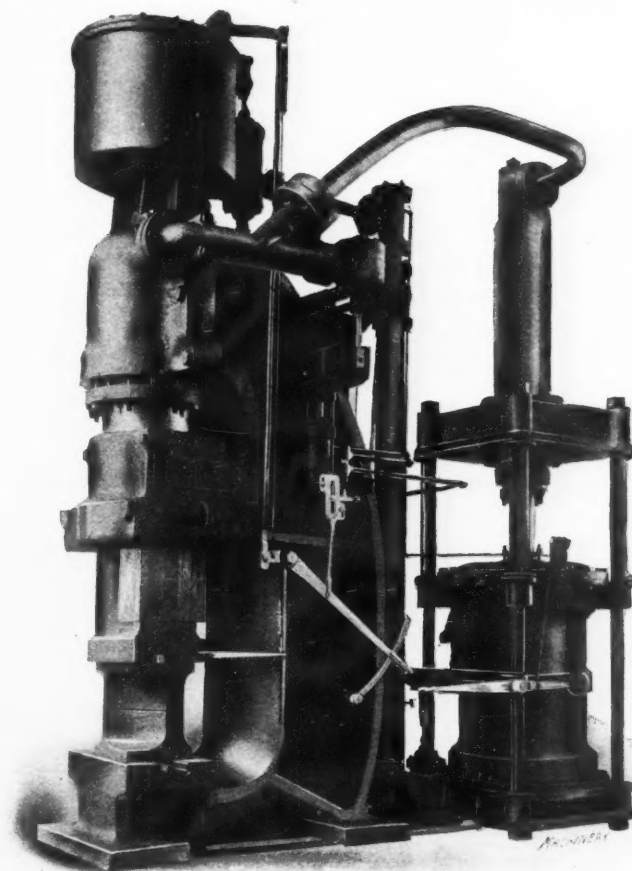
this necessity The Railway Materials Company, Chicago, has designed and placed on the market a Ferguson furnace which is illustrated herewith. This will be recognized as a counterpart of the Ferguson furnace almost universally used in railway

boiler shops for welding safe ends on locomotive flues. It is increased in size somewhat to accommodate the large superheater tubes. However, no other change has been made from the old design, and the same soft, clean, rapid and short heats are assured.

#### STEAM-HYDRAULIC FORGING PRESSES.

A 400-ton single column steam-hydraulic forging press made by the Chambersburg Engineering Company, Chambersburg, Pa., is shown in the accompanying illustration. The main frame is an open hearth steel casting of I-beam section, the web being heavily reinforced and stiffened by ribs. The frame has large guides for the ram and is fitted with a cap that is rigidly bolted on the front to take care of strains in any direction when forging beveled work. Additional support for the press is afforded by projecting flanges at the base of the frame.

This company manufactures the single column type in all sizes up to 400 tons pressure, and also builds a four column type with capacities up to 5000 tons. In both types a double



Chambersburg 400-Ton Steam-Hydraulic Press.

lever control is used, which is simple in construction and has the distinct advantage of being easier to operate. The operator has entire control of the press by two hand levers, one of which is used to adjust the stroke and the other to give the power stroke to the press; since their functions are the same as an operator has been accustomed to secure with the two levers of a steam hammer the operation of the press comes to him naturally. In either case the press ram follows the direction in which he has moved the hand lever.

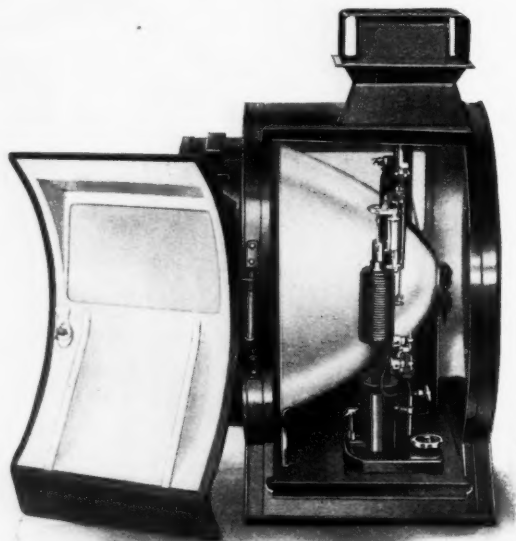
In the larger sizes of presses a triple intensifier is employed; thus in the Chambersburg press of 1500 tons capacity, by means of the triple cylinder intensifier, the operator may put either, 500 tons, 1000 tons or 1500 tons pressure on

the work and according to the work to be done use steam in proportion to the pressure exerted. This selective pressure design effects a great economy in steam consumption as compared to the usual single cylinder intensifier press in which a constant volume of steam equal to the full tonnage of the press is used regardless of the work being done. The presses are designed for maximum production at minimum operating and maintenance costs and are the result of a long experience in building hydraulic machinery.

#### PLYE-NATIONAL LOCOMOTIVE HEADLIGHT.

The Pyle-National turbo-electric generating set, type E, was designed by the Pyle-National Electric Headlight Company, Chicago, especially for locomotive headlight service, and has proved to be efficient, economical and reliable. It operates on all steam pressures ranging from 100 lbs. to the very highest, and on superheated as well as saturated steam without any adjustment.

Equipment E was designed to use the same armature as in previous equipments, and the same brush holders and brushes and the same ball bearings, which, as a rule, are practically all the parts that need replacing. The principal reason for designing the new type E equipment was to obtain a high steam economy, and at the same time to eliminate all features



Pyle-National Electric Headlight, Type E.

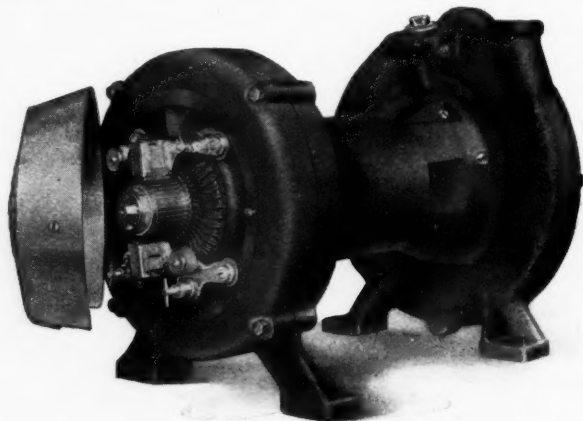
of the old equipment which experience had taught were undesirable. The steam consumption is very low.

Two ball bearings of a special annular type are used on the equipment. The bearing for the generator is located in the barrel on the end of the main casting, and the bearing supporting the turbine wheel is mounted in the turbine cap. Either of the ball bearings can be removed within a few minutes' time should occasion demand.

The dynamo is of a special design for headlight service. It is of an enclosed type with all windings securely protected from the weather and mechanical injury. The windings are proportioned to carry heavy overloads without injury and cannot be burned out even when short circuited.

The case and reflector are similar in size and appearance to the regular 18-in. round headlight case now extensively used. The over-all height is 30 in. This will be especially appreciated by those who have extremely high engines. The case has a side door and numbers and a patent front goggle and inner ring which allows perfect ventilation, thereby reducing to a minimum the breaking of headlight glasses. The patent gog-

gle is a simple design which is arranged to give free access to the reflector for cleaning, etc. The body of the case is made of heavier steel than any other case now in use. Reinforcing bands one inch wide are used throughout the case for stiffening purposes. All joints and connections are electrically welded



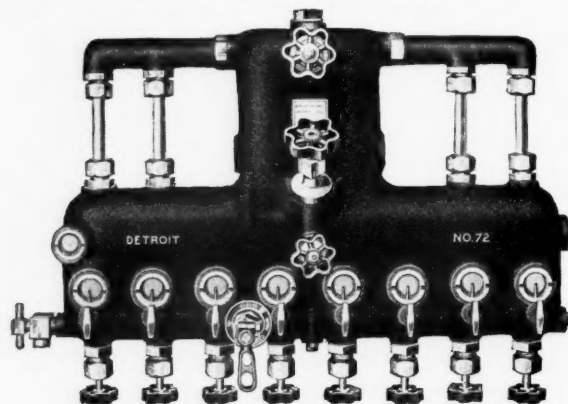
Turbine and Generator of Pyle-National Electric Headlight, Type E.

together, instead of riveted, which effectually prevents moisture or water from getting in and rusting out the metal. It is altogether the strongest headlight case that has ever been made for locomotive service.

#### DETROIT EIGHT-FEED LUBRICATOR.

The new No. 72 Detroit lubricator has a capacity of ten pints and eight feeds. It can be used on any locomotive on which it is desired to lubricate eight different points, particularly superheater mallet compounds. The six outer feeds can be used to lead to the high pressure valves, high pressure cylinder and low pressure valves; the two middle feeds to two air pumps, to one pump and an intercepting valve or to one pump and a mechanical stoker.

An oil control valve in the oil passage between the reservoir and the sight feed regulating valves places in the hands



Eight Feed Detroit Lubricator.

of the engineer a means of instantly starting, stopping or throttling the rate of feed and does away with the necessity of shutting off the feed regulating valves at a terminal or when refilling on the road, and consequently the necessity of again opening and adjusting all of these valves. The oil control valve makes it easy to save oil where otherwise the frequent closing, opening and readjusting of the feed valves would have made this economy impractical during short stops and periods of light service. After having once been regulated for perfect lubrication in a class of service, the feed regulating valves need not be disturbed or touched again until the service is changed.

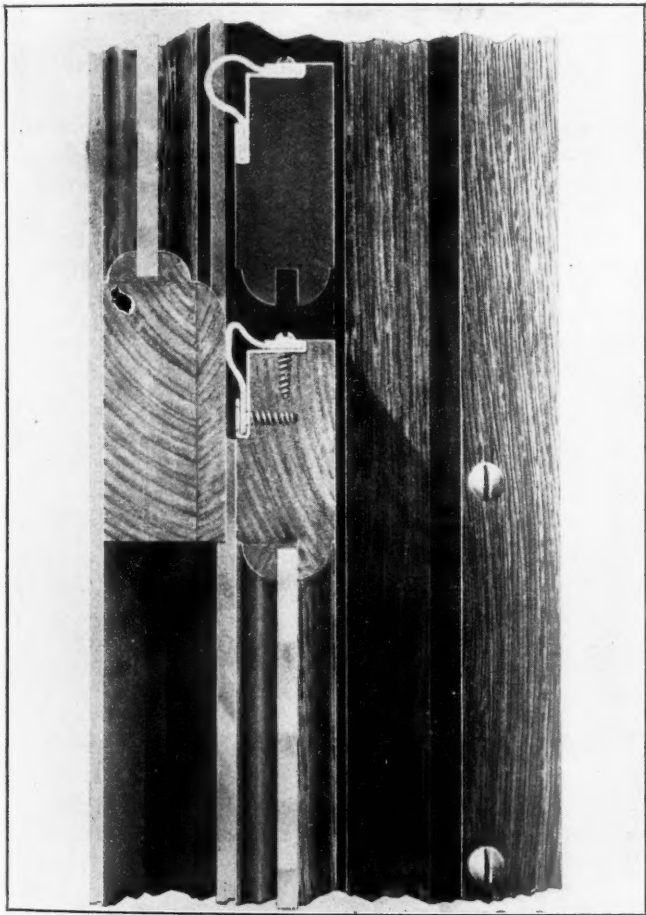


A half turn of the oil control valve starts or stops all feeds. A quarter turn shuts off all the feeds except the two middle ones which lead to points requiring continuous lubrication. The No. 72 lubricator is cast in one piece, exclusive of trimmings, and has the equalizing tubes and the water and oil passages drilled in the walls of the body and condenser. This construction reduces the number of parts to a minimum, precludes the possibility of equalizing the oil and water tubes from jarring loose and prevents leaking. As all oil passages are in the body the oil is not exposed to the cold and the rate of feed does not fluctuate. This lubricator is made by the Detroit Lubricator Company, Detroit, Mich.

#### MCCORD WEATHERSTRIP.

A weatherstrip for the windows of passenger cars, so arranged as to positively close the opening even under difficult conditions of alignment caused by inaccuracies of window openings or relative torsion of the car parts, is being exhibited at booth 507 by the McCord Manufacturing Company, Chicago.

The general construction and arrangement of this strip are clearly shown in the illustration, where it is shown as used as a seal between the upper and lower sash. It consists of a brass corner grasping, at the end of each leg, the edges of a strip of



McCord Weatherstrip Free and After Coming in Action.

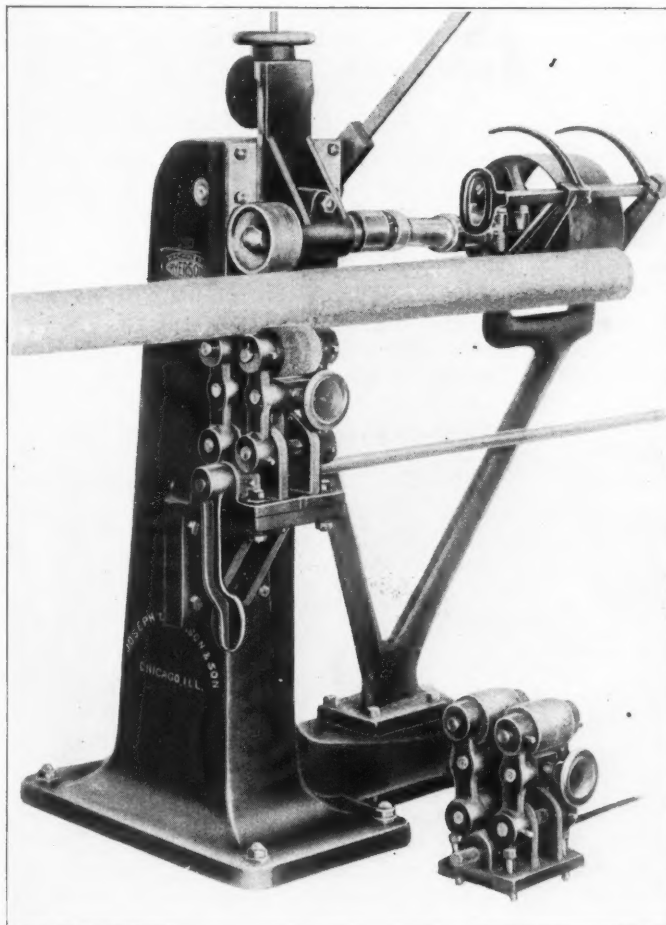
high-grade rubber, covered by linen duck. This strip will positively seal the opening up to the limit of its extension and is exceptionally durable. It will be noted that the screws holding the strip in place pass through the edges of the rubber as well as the lap on the metal body. In addition to these, however, there are spear points to retain the rubber in place while the strip is being applied.

The McCord strip has been adopted by a large number of prominent railways.

#### A NEW TUBE CLEANER.

The new Matthews tube cleaning attachment, which is here illustrated, was specially designed to be used in connection with the Ryerson tube cutting machine. This combination for tube cleaning and tube cutting gives the shop two complete machines for scarcely more than the price of one, and requires only the working space of one. One passage through the cleaning burrs finishes the cleaning, the tubes traveling about 10 ft. per minute. The scale is thoroughly scoured off without the slightest possibility of damage due to denting or chipping.

The essential elements are the friction wheel and the adjust-



Mathews Tube Cleaning Attachment.

able twin-roller cleaning burrs, which are built up of hardened serrated steel disks. These twin-roller cleaning burrs are assembled in a unit which is readily interchangeable with the roller tube support employed when the machine is used for cutting tubes. Hence, only two changes are required to change the cutting machine over to a cleaning machine; first, by replacing the cutting disk with the friction wheel, and, second, by substituting the tube support for the cleaning burrs. When used for cleaning the longitudinal travel of the tubes is effected by adjusting the roller support slightly out of square, the direction of travel and the rate of speed being determined by the angle of divergence. Joseph T. Ryerson & Son, Chicago, furnish these machines complete for both cutting and cleaning unless otherwise specified; but if desired, machines can be furnished equipped with cutter and reamer only.

Noiseless running is assured by the use of a universal shaft for connecting the driving shaft with the main spindle, which does away with all gearing and consequent noise. The cutting disk is 4½ in. in diameter and is secured on the main spindle which rotates in the vertical sliding head. The feed of the cutting disk is controlled by means of the counterbalanced

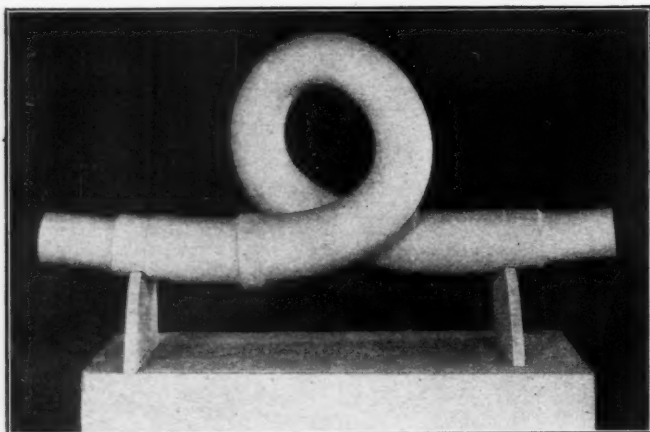
hand lever. The convenient position of the taper reamer opposite the cutting disk is an important feature of the design.

In five minutes this machine and two men can do more work and much better work than the same two men could do by hand in two hours. By the old hand method the tubes are dented, chipped and sometimes destroyed, but on this machine they are not injured in any way.

A three-fold economy is claimed for this machine: First, it reduces the cost of cleaning to about one-tenth of the hand method; second, it saves the labor cost of carrying the tubes between machines, and, third, it is the ideal tool for the moderate-sized shop, as the one machine will do all the work which at best would require two separate machines, thereby saving the expense and floor space of a second machine.

#### CAMBRIA STEEL AXLES.

It's easy enough to tie steel rods into double bow knots and bend car axles into fancy shapes and do it cold, if you know how—to make the steel and do the tying. At least that is what they say at the booth of the Cambria Steel Company, of Johnstown, Pa., where they have the real things which we can only show in photographs. You see, it's this way. You start away back with the ore and make the proper selections and watch it like the proverbial cat whose eye is on the mythical mouse; and you keep watching it down through the furnaces, blast and open hearth,



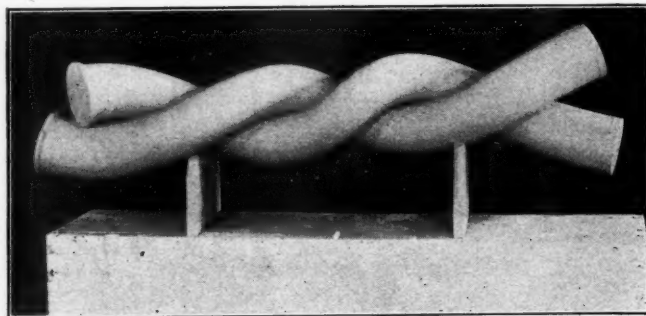
Driving Axle Bent Cold Around a Mandrel.

until it comes out into the ingot containing the proper quota of carbon, say .50 or .60, and manganese, Oh, well, anywhere along between .60 and .80, with just a dash of phosphorus, say, .02 for sauce and about .04 sulphur, as a reminder of the fires of purification through which it is passed, with silicon to suit the taste. Then, following the recommendations of Mother Goose, you

"Patty cake, patty cake, hammer man,  
"And roll it and roll it,  
"And pick it and pick it,  
"And toss it in the oven  
"For tender and car."

of course, you have to have a heavy hammer—no tack driving affair; but a real, solid, 15,000-lb. affair. And you take time for it, too, some 20 minutes or so; and when you toss it back in the oven you must regulate its heat most carefully, and when it comes out, glowing with pride, just dip it in a nice oil bath that is regulated in temperature to the nicety of a baby's morning plunge, and then wrap it up and warm again and let it sleep off its sweat in a nice Turkish bath annealing furnace until it is quite cool, and there you are. Then the piece of steel will act like a spring up to 50,000 lbs.; won't break under 90,000 lbs.; will stretch

28 per cent. before it lets go, and if you want to be real mean to it, put it under a hammer and bend it over a mandrel, or put it in a big boring mill and twist it, and you



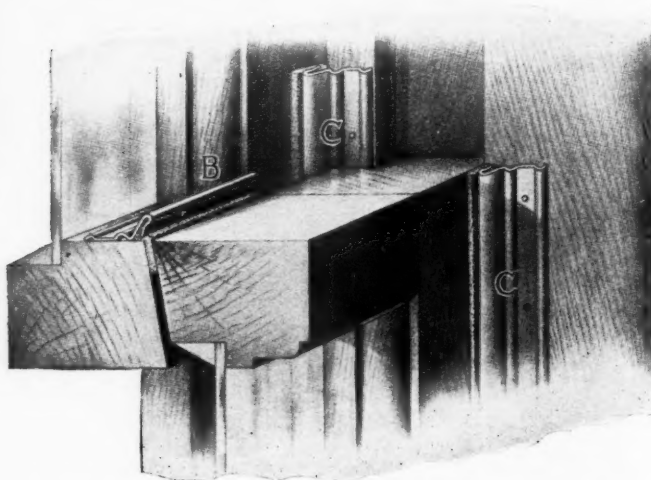
Cambria Car Axles Twisted Cold.

will find that it can be just as obstinate as you are and will elongate 45 per cent. and never show a sign of crack or flaw. Now, if that isn't an easy trick, what is?

#### THE ASCO WEATHERSTRIP.

The Asco weatherstrip, for use on both doors and windows of suburban cars or other passenger equipment requiring a low price seal is made of either steel or brass formed in the shapes shown in the illustration and gripping a section of finest grade felt. This felt is not affected by water or grease and has a remarkable resiliency. The same form of grip is used at all the different points on the windows, a slightly different arrangement of the same general style being provided for the door strips.

On the window sill and between the upper and lower sash, the felt strip is turned down away from the brass holder and forms the seal by its own resiliency. At the



Weather Strip for Application to Equipment Already in Service.

sides of the sash, the spring of the brass or steel shoulder is taken advantage of. This seal when properly applied insures the window or door being proof against wind, rain or dust. It is very easily applied, the holes being punched at proper intervals during the process of manufacture. It can be applied to the outside of the window as well as to the inside if desired.

The Asco weatherstrip is made by the Acme Supply Company, Chicago, and is on exhibition at booth No. 573. It is not intended for use in new high-class equipment. An inspection of this exhibit will show the construction recommended by this company for this purpose.